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bulletin of
Duke University
1997-98

School of Law



The Mission of Duke University

The founding Indenture of Duke University directed the members of the university to "develop our resources, increase our wisdom, and promote human happiness."

To these ends, the mission of Duke University is to provide a superior liberal education to undergraduate students, attending not only to their intellectual growth but also to their development as adults committed to high ethical standards and full participation as leaders in their communities; to prepare future members of the learned professions for lives of skilled and ethical service by providing excellent graduate and professional education; to advance the frontiers of knowledge and contribute boldly to the international community of scholarship; to foster health and well-being through medical research and patient care; and to promote a sincere spirit of tolerance, a sense of the obligations and rewards of citizenship, and a commitment to learning, freedom, and truth.

By pursuing these objectives with vision and integrity, Duke University seeks to engage the mind, elevate the spirit, and stimulate the best effort of all who are associated with the university; to contribute in diverse ways to the local community, the state, the nation, and the world; and to attain and maintain a place of real leadership in all that we do.

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School of Law

EDITOR
Judith Smith

PRODUCTION COORDINATOR
Ashley Memory

LAW SCHOOL EDITORS
Sara Sun Beale
E. Carol Spruill
Janse Haywood
Sally A. Barnett

STAFF SPECIALIST: COURSE CATALOG MASTER
Margaret R. Sims

PHOTOGRAPHS
Dan Crawford
Ron Ferrell
Les Todd
Jim Wallace

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The information in this bulletin applies to the academic year 1997-98 and is accurate and current, to the extent possible, as of June 1997. The university reserves the right to change programs of study, academic requirements, teaching staff, the calendar, and other matters described herein without prior notice, in accordance with established procedures.

Duke University does not discriminate on the basis of race, color, national origin, handicap, sexual orientation or preference, gender, or age in the administration of educational policies, admission policies, financial aid, employment, or any other university program or activity. It admits qualified students to all the rights, privileges, programs, and activities generally accorded or made available to students. For further information, contact the equal opportunity officer (919-684-4736).

Information that the university is required to make available under the Student Right to Know and Campus Security Acts may be obtained from the Office of University Relations at 684-2823 or in writing to 615 Chapel Drive, Box 90563, Duke University, Durham, North Carolina 27708.

Duke University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097; telephone number 404-679-4501) to award baccalaureates, masters, doctorates, and professional degrees.

Inquiries about the Law School may be made by calling (919) 613-7006. Queries about admissions, financial aid or other aspects of the Law School's programs, may also be sent via the Internet to ADMISSIONS@LAW.DUKE.EDU. Please also see the Law School's World Wide Web Site at [HTTP://WWW.LAW.DUKE.EDU](http://WWW.LAW.DUKE.EDU).

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Calendar of the School of Law 1997-98

Summer Term-1997

June

- 9 Monday, Orientation
- 10 Tuesday, First day of class

August

- 8 Friday, Last day of class
- 12 Tuesday, Examination
- 16 Friday, Examination

Summer Institute in Geneva

July

- 6 Sunday, Orientation
- 7 Monday, First session classes begin
- 31 Thursday, Last day of class

August

- 3-5 Sunday-Tuesday, Examinations

Summer Institute in Hong Kong

July

- 13 Sunday, Orientation
- 14 Monday, First session classes begin

August

- 8 Friday, Last day of class
- 10-12 Sunday-Tuesday, Examinations

Fall Term-1997

August

- 21, 22 Orientation for entering students
- 25 Monday, First day of class for all students

October

- 20-24 No classes, off-campus interviews and first year writing

November

- 27-28 Thanksgiving recess

December

- 9 Tuesday, Last day of class for all courses
- 10-20 Reading and examination period for first-year courses
- 10-21 Reading and examination period for upperclass courses

Spring Term-1998

January

- 12 Monday, First day of class for all regular courses
- 16-18 Intensive Trial Practice weekend

March

- 16-20 Spring break

April

- 24 Friday, Last day of classes for all courses
- 25-May 12 Reading and examination period for upperclass courses
- 25-May 13 Reading and examination period for first-year courses

May

- 16 Saturday, Law School Hooding Ceremony
- 17 Sunday, University Commencement

[The current Law School calendar is also available at the Law School's World Wide Web site at <http://www.law.duke.edu>.]

University Administration

Nannerl Overholser Keohane, Ph.D., President
John W. Strohbehn, Ph.D., Provost
Ralph Snyderman, M.D., Chancellor for Health Affairs and Dean, School of Medicine
Tallman Trask III, Executive Vice-President
Eugene J. McDonald, LL.M., Executive Vice-President-Asset Management
John F. Burness, A.B., Senior Vice-President for Public Affairs
John J. Piva, Jr., B.A., Senior Vice-President for Alumni Affairs and Development
Charles E. Putman, M.D., Executive Vice-President for Administration
John F. Adcock, B.S., Vice-President and Corporate Controller
Tom A. Butters, B.A., Vice-President and Director of Athletics
Janet Smith Dickerson, M.Ed., Vice-President for Student Affairs
Joseph S. Beyel, M.S., Vice-Chancellor for Medical Center Development and Alumni Affairs
William J. Donelan, B.A., M.S., Vice-Chancellor and Chief Financial Officer for Medical Center Administration
Gordon G. Hammes, Ph.D., Vice-Chancellor for Medical Center Academic Affairs
Michael Israel, A.B., M.P.H., Vice-Chancellor for Health Services and Executive Director of Duke University Hospital
David B. Adcock, J.D., University Counsel
N. Allison Haltom, A.B., Secretary of the University
William H. Willimon, M.Div., S.T.D., Dean of the Chapel

Law School Administration, 1997-98

Pamela B. Gann, Dean
Sara Sun Beale, Senior Associate Dean, Academic Affairs
Richard A. Danner, Associate Dean, Library and Computing Services
Judith A. Horowitz, Associate Dean, International Studies
Cynthia L. Rold, Assistant Dean, Admissions and Financial Aid
Robert E. Smith, Assistant Dean, Career Services
Susan L. Sockwell, Associate Dean, Student Affairs
E. Carol Spruill, Assistant Dean, Academic Affairs
Linda G. Steckley, Associate Dean, External Affairs





Altruism combined with realism; knowledge of fundamental principles and capacity to apply them; courage to insist on the right and patience to achieve it; understanding of the timidity of the weak; fearlessness of the domination of the powerful; sympathy for the mistakes of the indiscreet; caution of the craftiness of the unprincipled; enthusiasm for that which is fine and inspiring; reverence for that which is sacred; these are some of the attributes of great lawyers.

Justin Miller
Dean, 1930-34
Duke University School of Law

The Distinction of Duke



Duke University

The Law School is an integral part of one of the nation's foremost research universities. Duke's origins were in Randolph County where, in 1838, the Methodist and Quaker communities formed Union Institute to educate their children. The school was chartered by the state in 1851 as Normal College and granted the authority to grant degrees in 1853. In 1859 its mission was expanded to educate ministers and its name changed to Trinity College, which relocated to Durham in 1892. In 1924, a grant from James Buchanan Duke made possible its transformation into Duke University, with the advice by Mr. Duke that "courses at this institution be arranged, first, with special reference to the training of preachers, teachers, lawyers and physicians, because these are most in the public eye, and by precept and example can do most to uplift mankind."

Although Duke is young by comparison to other major American universities, its undergraduate programs and its graduate and professional schools together have attained an international stature and a reputation for quality and innovation that few universities can match. Among Duke's unique strengths are an extensive network of interdisciplinary collaboration, an emphasis in teaching and research initiatives addressing global and international issues, and a commitment to growth in environmental studies and the basic sciences.

Duke has one of the most spacious and lovely campuses of any major university. The beautiful neo-Gothic buildings on West Campus, stately Georgian-style architecture on East Campus, and stunning contemporary design of its newest centers and schools (including an addition to the law building itself) are situated in and around 7,700 acres of undeveloped forest and 30 miles of jogging trails. Geographically, Duke is located near the cultural and research resources of three other major universities and to the fast-growing high-technology business and research center of the Research Triangle Park. It is also accessible to the natural beauty of the Blue Ridge Mountains to the west and the state's many beaches to the east. The climate is mild, with spring beginning as early as February and fall reaching well into November. Plays, concerts, lectures, and athletic events are plentiful in a setting free of many of the day-to-day aggravations and distractions of larger metropolitan centers. For these reasons and others, survey after survey singles out the Triangle area in which Duke is located for its high quality of life.

Current information on Duke University programs and events is available through the Law School's World Wide Web site: <http://www.law.duke.edu>.

The Law School's Mission

The Law School was established as a graduate professional school in 1930. Its mission is to prepare students for responsible and productive lives in the legal profession. As a community of scholars, the Law School also provides leadership at a national and international level in efforts to improve the law and legal institutions through teaching, research, and other forms of public service.

Because the Law School's mission focuses on students' broader preparation for a life in the law, students should not come to the school expecting primarily to amass information about the specific laws of particular jurisdictions. In fact, only a small part of the preparation required for participation in the legal profession entails the transmission of legal rules, which are countless and subject to frequent change and reinterpretation. The best lawyers are those who have internalized the processes of legal reasoning, which require creativity as well as intellectual discipline and critical analysis, and who have acquired the capacity for legal judgment that can be adapted and applied to new fields and to the circumstances of an ever-changing world. At Duke Law School the faculty focuses on helping students develop the adaptive skills and broader perspectives required of lawyers across the spectrum of legal practices.

Learning Environment

Duke law students come from all parts of the United States and, in already significant and growing numbers, from other parts of the world. Although about a tenth are graduates of Duke's Trinity College, most Duke law students have few prior contacts with the area. Most live in the apartments, townhouses, and renovated older homes within a few minutes of the school. Because of these circumstances, Duke law students are more likely than others to find their social circles merging with their academic ones.

Admission to Duke Law School is highly competitive. Only a handful of law schools admit an entering class with a higher median Law School Admission Test (LSAT) score, and most students graduated at or near the top of their undergraduate classes. Many students have earned advanced degrees in other fields and many have achieved distinction in non-academic pursuits as well, such as athletics, business, or community service. As one should expect from such a group, they are competitive and hard working. The Law Library receives intensive use by students throughout most weekends and a few students can be found there into the small hours of most nights.

At the same time, Duke Law School has a deserved reputation for maintaining a friendly and helpful environment for students, with a less competitive atmosphere than is found at other top law schools. Several factors make this possible. First, Duke is smaller than most of its rivals. The school aims at an entering class of about 200. Several schools with which Duke competes are twice that size, and some are three times as large. While size may offer some advantages, it also depersonalizes relationships among students and between faculty and students.

Second, the Duke law faculty is more accessible than most. In part, this accessibility reflects a curricular design that brings all first-year students into close contact with a member of the regular faculty through a small section of about 24 students in one course in their first semester. These small sections offer students the opportunity to get to know at least one professor well and to support each other in their introduction to the law school experience. Many students continue in upperclass years to find their close friends and study partners among those who were in their first-year small sections.

Law faculty accessibility is also a mark of the ethic of our faculty, who view their profession as teaching and scholarship, not the practice of law. Duke faculty are excellent, dedicated teachers. In addition, professors tend to be in their offices on most days throughout the calendar year and have either regular office hours or very flexible "open-door" policies.

Another factor contributing to the somewhat less competitive atmosphere at Duke is the fact that Duke law graduates disperse more broadly upon graduation than do those of most law schools, to about 30 to 35 states. As a result, few Duke students are in direct competition for the same first job, except possibly for the most highly competitive judicial clerkships. In addition, placement rates of Duke law students are very high. Of the most recent graduating classes, 93 percent of students had jobs by the date of graduation and over 98 percent were employed within six months. Over 20 percent of students typically begin their careers in judicial clerkships.

Despite the school's small size, upperclass students have an unusually large number of opportunities to participate in significant shared professional activities. The Law School publishes six journals, including the *Duke Law Journal*, *Law and Contemporary Problems*, the *Alaska Law Review*, the *Duke Journal of Comparative and International Law*, the *Duke Environmental Law and Policy Forum*, and the *Duke Journal of Gender Law and Policy*, giving Duke law students unusually extensive opportunities for scholarly writing and editing activities. Besides journal participation, students have many opportunities to engage in professionally related activities. The Pro Bono Office at the Law School annually places over 200 students in activities in the public, private, and nonprofit sectors. Some represent abused children as guardians ad litem; some prosecute cases in a district attorney's office; others represent prisoners, advise victims of domestic violence, or prepare wills for AIDS patients. There are also over two dozen student organizations and special interest groups at the Law School, which are described in greater detail under the heading "Beyond the Curriculum" in this bulletin.

For all these reasons, the environment of the Law School is distinctive. Duke law students compete vigorously but as friends and colleagues. While alienation and hostility are traits that may be found at Duke from time to time, they do seem less common and less intense than at most major national law schools.

Professionalization

In recent years, there has been growing concern in the legal profession and the public more generally about the adequacy of professional training of lawyers. Complaints have focused on (1) the inadequacy of legal skills, especially writing, negotiation and mediation, and oral persuasion, (2) the decline in ethical standards, and (3) the failure of legal education to keep pace with the changing demands of law practice, which is more international and which requires greater knowledge of business, administrative agencies, and technology than in the past. Duke Law School is addressing these concerns in a variety of ways and on several levels.

Legal Research and Writing and Lawyering Skills Programs. Duke's year-long legal research and writing program for first-year law students is unsurpassed among the top law schools in this country. At many schools, these courses are taught by upperclass law students, recent law graduates, or practitioners who serve as adjunct instructors. At Duke, the research and writing course is taught by persons with substantial past law practice experience who have moved into the teaching of legal writing as their primary professional commitment.

Duke's approach to teaching writing is relatively new to legal education. It combines an emphasis on the integration of legal analysis, writing, and research with a focus on how readers read a document and what techniques used by the writer will help readers understand the writer's intentions. In their substantive courses, the students learn how to be creative in constructing a variety of interpretations of a given piece of prose; in the writing course, they learn how best to limit the number of interpretations of their prose that others can make.

Writing assignments range from short case briefs to motion documents and appellate briefs. The students' classroom experience is supplemented by individual conferences with instructors and large group lectures on reader expectation principles.

Legal research skills are taught by members of the Law School's excellent library staff and are fully integrated with the legal writing instruction.

In the upperclass curriculum, Duke has developed a distinctive clinical program that emphasizes clinical training primarily through simulation. This program covers a wide variety of fields of legal study. Over half of Duke's law students take courses in negotiation and mediation and in trial practice. Practical, hands-on clinical training is also provided in such courses as appellate practice, collective bargaining, death penalty litigation, entertainment law, estate planning, federal civil rights, international arbitration, professional malpractice, and professional responsibility. Some of these courses are taught by members of the regular faculty and some are taught by outstanding practitioners, several of whom come to us on an adjunct basis from leading law practices in Washington D.C. and New York City. A limited number of upperclass students enroll in a criminal practice clinic and participate in criminal litigation with local attorneys, and recently established clinics enable students to work under faculty supervision on the legal needs of AIDS patients and on representation of defendants in capital cases. Many students enroll in an appellate practice course, in which they receive one-on-one feedback on a written brief and oral argument from a distinguished appellate judge. Finally, law students benefit from the presence at Duke of the Private Adjudication Center (PAC). This center is a non-profit corporation that undertakes research and education and provides alternative dispute resolution services to clients wishing to avoid the delays and costs of traditional litigation; most recently it has undertaken the processing of claims from the Dalkon Shield litigation. The PAC offers opportunities for some students to obtain direct practical experience in alternative dispute resolution as well as participation in developing innovations in this important field.

Program in Ethics and the Legal Profession. In response to widespread concern about ethical standards in the legal profession and changes in the structure of the practice of law, Duke is in the process of revising its curriculum in ethics and professional responsibility. With the support of the Keck Foundation, from 1993-97 Duke offered both an intensive one-week course in legal ethics in January for first-year students and an array of upperclass electives focused on ethical issues in specific areas of practice which students might choose to enter. These upperclass courses addressed ethical issues in representing corporations, the government, those needing estate planning and family law representation, and parties in civil and criminal litigation; courses have also been offered in the history of the legal profession, judicial ethics, and professional malpractice. Following its review of the experience under the Keck grant, in the spring of 1997 the Duke faculty committed itself to adding a required upperclass course in ethics and professionalism beginning in 1998-99, and to reevaluating and redesigning the first-year introduction to ethics. The Program in Ethics and the Legal Profession evidences the faculty's commitment to transmitting the highest standards in professional responsibility.

The International Dimension. No law school can ignore the impact on the legal profession of the current globalization of world markets, the growth in economic regional integration, such as the European Union and the North American Free Trade Agreement, and the growing interdependence of individual countries facing common threats to the environment, international security, and political stability. The Law School at Duke has helped to lead the efforts of the wider university community to respond to these important developments.

The Law School's innovative approach to preparing its students for law practice in an increasingly international economic and political scene was evident when it became the first law school in the United States to offer American students the special opportunity to begin their legal studies in the summer, to pursue a formal J.D./LL.M. joint-degree program in international and comparative law. This program attracts to

Duke many students with a special interest in these fields, with close to one out of seven members of each entering class enrolled as joint J.D./LL.M. students. Students in this program devote a substantial part of their first year to the study of foreign and international law, thus materially broadening their perspective on the standard first-year law material. These same students go on to study in the Law School's four-week residential summer programs in Geneva or Hong Kong. The annual Institute in Transnational Law in Geneva, sponsored by Duke and the University of Geneva Faculty of Law, involves over 50 participants, about one-third of whom are from Duke with the remainder from more than 15 countries throughout the world. The faculty comes from Duke Law School and from several foreign and other American universities. This program provides its participants an opportunity to meet representatives of such Geneva-based international bodies as the World Intellectual Property Organization and various private international law firms. The program in Hong Kong, the Asia-America Institute in Transnational Law, has been developed in conjunction with the University of Hong Kong Faculty of Law along the same model as the Geneva program. It offers an alternative setting for joint-degree students with special interests in Asia and the Pacific Rim. No other law school offers summer international programs of better scope, quality, faculty, and student participation.

The Law School's excellence and growing presence in comparative and international law are made possible by a superb core faculty. Some faculty members are from foreign countries and many others are leading experts in various fields with international and comparative dimensions, including comparative law, international business transactions, and public international law. New members of the faculty recently have been added in the fields of privatization, international trade, and international environmental law. Duke law faculty have taught or lectured to international audiences in as many as 40 countries in recent years.

Because of the Law School's strengths in the international law area, the school has attracted foreign faculty visitors from many countries. Regular ties have now been established with professors who are recurring visitors from Brussels, Tokyo and Beijing. In addition, recent years have brought visitors from Aarhus, Alberta, Cape Town, Caracas, Copenhagen, Exeter, Geneva, Hamburg, Jerusalem, Kiev, Kyoto, Melbourne, Munich, Munster, New Delhi, Oxford, Osaka, Paris, Pusan, Seoul, Shanghai, Shenzhen, Sydney, Taipei, and Tokyo. With such visits often comes the enrichment of the curriculum by specialized course offerings in the international and comparative law fields.

In addition to this influx of international faculty, Duke also has an international student population that is usually about 10 percent of the student body. Besides international students admitted to the regular J.D. program, about 50 lawyers are admitted each year to the program leading to the LL.M. (Master of Laws) degree. They come from countries as disparate as Argentina, Belarus, Chile, the People's Republic of China, Denmark, England, Germany, Iceland, Indonesia, Japan, Kazakhstan, Korea, Malaysia, Mexico, Panama, Poland, Saudi Arabia, South Africa, Taiwan, Tanzania, and Thailand. A few LL.M. graduates remain for a doctorate. Duke is unusual in the degree to which these students are integrated into the community of American students. Most LL.M. candidates take one course from the first-year curriculum, often in one of the small sections where social and professional interaction is most likely to occur. Most of their other courses are taken with American students as well. LL.M. students also serve as staff members of the *Duke Journal of Comparative and International Law* and are represented on the Duke Bar Association Executive Committee.

Interdisciplinary Studies. The Law School has a strong commitment to unifying its students' professional learning with the broadest dimensions of knowledge about human affairs and institutions. It recognizes the unfortunate impulse of some law students to exclude from their vision all learning save that for which they see immediate

career impact and appreciates the fact that the best lawyers are ones who have had their minds opened to the wider implications and consequences of law. This recognition is supported strongly by the larger university's commitment to interdisciplinary studies. The Law School not only offers a rich curriculum that incorporates perspectives in economics, philosophy, literature, history, and technology, but also a range of joint-degree program with several Graduate School departments and professional schools that is at least as extensive as that of any other national law school. Through these programs, students can pursue two degrees simultaneously and, via overlapping credit arrangements, in less time than both degrees together would ordinarily take. These joint-degree programs attract students interested in preserving as professionals a life of the mind, and in attaining a broader view of the discipline of law that may over the longer term enhance their professional judgment.

Over 25 percent of Duke law students pursue a degree at Duke in addition to the J.D. Students pursuing an M.A. or M.S. degree participate with the joint J.D./LL.M. students in Duke's unique summer-entering program, through which students can begin their studies in June and complete two of the six major first-year courses by mid-August. These joint J.D./M.A. or J.D./M.S. students are then free to enrich their first-year Law School experience with courses in their other chosen field. For those seeking the J.D. and M.A. degrees in English, history, philosophy, romance studies, humanities, economics, cultural anthropology, political science, psychology, environmental studies, or public policy studies, or an M.S. degree in mechanical engineering, work toward both degrees can be completed within the remaining two academic years, with a slight overload during some semesters.

Students pursuing joint professional degrees in the Divinity School, the Fuqua School of Business, the Nicholas School of the Environment, or the Sanford Institute of Public Policy begin their studies in the fall with the rest of the first-year class and obtain in four years both their J.D. degree and an M.T.S. (theological studies), an M.B.A. (business), an M.E.M. (environment), or a M.P.P. (public policy). A few others pursue a longer joint J.D./M.D. program in law and medicine, or a J.D./Ph.D. program in political science. Students in these programs often begin their studies with career goals that require professional immersion in the two different professions. While the two degrees are not a guarantee of better job opportunities, law alumni in practice report the desirability of more exposure by students to other fields, and have spoken especially highly of the value to lawyers of training in business. Other joint-degree programs are sometimes arranged on an individualized, ad hoc basis. Greater detail about these programs is set forth in "Degree Programs" in this bulletin.

The tremendous success of the joint-degree programs at Duke is due, in part, to the extensive links between the faculty and other disciplines. The Duke law faculty has proportionately more joint appointments than any law faculty, and many professors from other departments and schools at Duke and from the University of North Carolina at Chapel Hill, North Carolina Central University, and North Carolina State University hold adjunct appointments in the Law School. Disciplines represented by these secondary appointments include business, English, history, philosophy, political science, psychiatry, psychology, public policy, and religion. The group includes several senior persons of extraordinary attainment and national visibility whose presence enriches the intellectual climate of the Law School. The joint professional degree programs are also facilitated by the physical proximity of the professional schools. The Fuqua School of Business and the Sanford Institute of Public Policy are both next-door neighbors, and the Nicholas School of the Environment is within a short walk of the Law School.

Library and Academic Computing. The Duke Law Library is among the very best in the country. Its book collection of over 500,000 volumes is extraordinary, especially for a law school of Duke's size. Even more important in this new age of academic computing, the level of its electronic information sources, its computing services, and

the professionalism of its staff are virtually unparalleled.

Recent computer and network upgrades enable students and lawyers to engage in the most sophisticated and comprehensive legal research available. A recently completed physical expansion of the law library has increased its size by 50 percent, greatly enlarging the study space and the number of computer workstations with network access available to students. The pervasive importance of computers to modern law study—Duke's ability to support computer—are reflected in the requirement (with appropriate financial aid allowances) that entering J.D. candidates own or buy a computer capable of accessing the student network. Through the law library, access may be had to resources in other libraries at Duke and, through interlibrary loan requests, from other universities. Finally, the library staff is well-trained, easily accessible, and extremely helpful to students. Visitors from other law schools and institutions often note the extraordinary quality of the library services available from Duke's law library staff.

The Faculty

The Duke Law School faculty is unquestionably its greatest asset. About the same size as the law faculties at Chicago and Cornell, it is as wide-ranging and distinguished as any of its competitors. Duke law professors have been Rhodes, Marshall, and Fulbright Scholars, editors-in-chief of law journals, and clerks to federal appellate judges and Supreme Court justices. They bring to their teaching not only a love of teaching but significant practical experience in both public and private sectors as partners in prestigious law firms, legal services lawyers, public defenders, and government attorneys. Gradual increases in total faculty size have enriched the core faculty while improving the student-faculty ratio.

Because of its excellent faculty in the corporate law fields, Duke is particularly successful in attracting students with career interests in this area. It also has some of the finest faculty of any national law school in constitutional law and constitutional history; administrative law and regulation, including regulation of the environment and the health industry; sports law; legal theory including feminist and critical race theory; and the process-related fields of criminal and civil procedure, litigation, and alternative dispute resolution. Its interdisciplinary faculty is extraordinary and includes world-class scholars in critical literary theory, moral philosophy, ethics, and history. A growing body of faculty in international and comparative law has given Duke prominence in these important fields as well.

Members of the current law faculty publish widely and with great distinction. Some have published award-winning books and treatises; Professor Donald Horowitz, for example, recently won the Ralph J. Bunche Prize of the American Political Science Association for his book on electoral reform in South Africa. Many faculty members have published articles in the best national law journals that are among the most cited works in their fields. Over half of the faculty have published textbooks in their areas of interest, including texts that lead their fields in environmental law, securities regulation, sports law, fiduciary obligations, First Amendment, gender and law, and federal criminal law. Members of the faculty also lecture widely, at other law schools, at national association meetings and conferences, and in international settings as diverse as Cape Town, Moscow, Budapest, Tokyo, London, Kuala Lumpur, Ottawa, Warsaw, Taipei, and Helsinki. In recognition of their distinguished scholarship, members of the faculty have received prestigious fellowships from such organizations as the Guggenheim Foundation, the Rockefeller Foundation, the Carnegie Foundation, the Council on Foreign Relations, and the National Humanities Center, and have been invited to membership in such organizations as the American Academy of Arts and Sciences and the National Academy of Science. They also serve on editorial boards of such journals as the *American Journal of Comparative Law*, the *Journal of British Studies*,

the *Journal of Democracy*, *Law and History Review*, *Law & Philosophy*, *Law Library Journal*, *Law and Contemporary Problems*, and *Psychology, Crime and Law*.

The Law School faculty is actively engaged in local, national, and international efforts to improve law and legal institutions and to effect changes in society. Scholars in professional schools, more so than their colleagues in the arts and sciences, have access to persons in government, the judiciary, business, and religious and other important institutions in our society. This access provides them an opportunity to seek to apply their knowledge and research toward influencing legal change. The Duke Law School faculty is as active as any in the United States in the influence it exerts and the commitment it displays to public service. Several faculty members give testimony to and consult regularly with government agencies and departments on such topics as health care reform, reform of the Federal Rules of Civil Procedure, national security issues, national service, and the nomination of federal judges and Supreme Court justices. Many are involved in work with the American Law Institute, on Restatements of the Law or projects in various fields including the law governing lawyers, torts, and complex litigation; one faculty member currently serves as co-reporter for the ALI's Principles of the Law of Family Dissolution, and another faculty member for a new Restatement of Agency and Fiduciary Obligation. Several members of the faculty are active in various consulting groups with the American Bar Association, including the ABA's Working Group on Lawyers' Representation of Regulated Clients, and the Central and Eastern European Law Initiative. Some have participated on the North Carolina General Statutes Commission or been involved in other ways in state and local law reform projects. Other faculty members advise private and public clients on issues of constitutional law, intellectual property, international human rights, environmental policy, sex and race discrimination, and sports law.

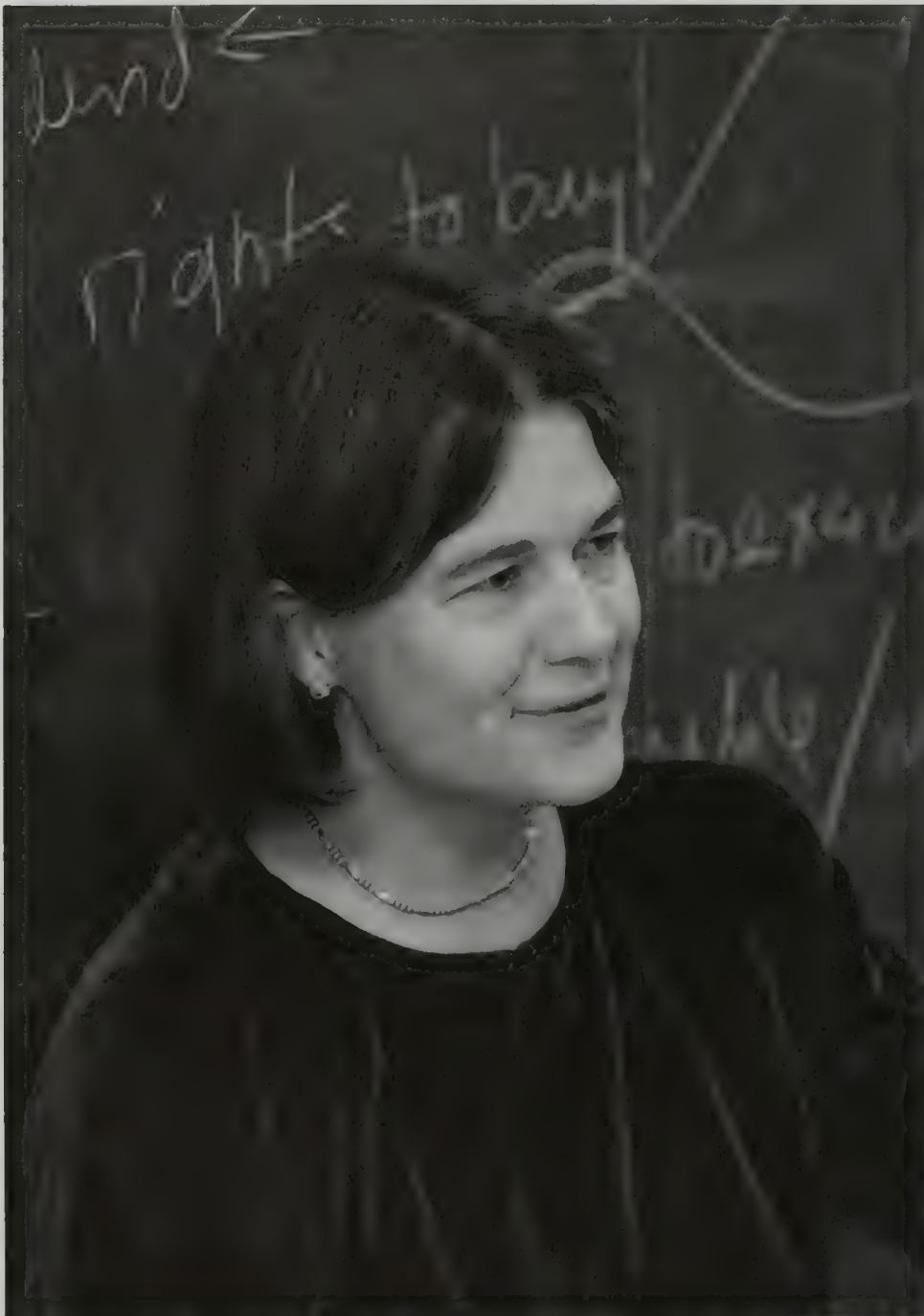


Complementing the strengths of the regular faculty are the members of the extended faculty network on which the Law School draws to enrich its curriculum. This extended faculty includes the joint-appointment faculty discussed above under Interdisciplinary Studies; adjunct faculty members who add critical expertise and experience in specific practice areas, especially trial practice and alternative dispute resolution, banking, estate planning, and securities practice; distinguished judges who help teach courses in professional responsibility, legal ethics, and appellate practice; and international visitors who regularly teach courses in the international and comparative law fields. This network of ties makes Duke as thoroughly integrated in its intellectual life as any American law school.

The collective presence of these secondary faculties manifests the self-confidence of an institution reaching out to the legal profession, to other academic communities, and to the international legal world for the best that these constituencies have to offer to those engaged in the study and illumination of law. Together with the supportive student environment and a talented and dedicated regular faculty willing to innovate and respond to the changing needs of law practice, they provide a truly distinctive opportunity for the study of law.

Another important aspect of the law faculty's commitment to its students is the relationship it maintains with its alumni. Duke's law alumni are among the most dispersed of any law alumni body. The Law School uses this fact to its advantage, gaining the help of its alumni to recruit admissions candidates from throughout the country and the world and in providing placement counseling and assistance to its students. To maintain a sense of community and identity with the Law School and among its alumni, the Office of External Relations coordinates and supports the activities of local law alumni associations. Over 40 such associations now exist, including international groups in Europe, Latin America, and Asia. Alumni awareness of the progress and needs of the school is maintained through annual educational and social events attended by Law School representatives. These programs, in addition to regularly scheduled reunions at the Law School and career advising panels conducted by alumni for our students, foster lifelong engagement with the school through the decades despite the distance.

Law Faculty



Presented here are faculty holding academic appointments in the Law School extending beyond one year.

Katharine Tiffany Bartlett, *Professor of Law*

B.A. 1968, Wheaton College; M.A. 1969, Harvard University; J.D. 1975, University of California, Berkeley. Professor Bartlett, formerly a secondary school teacher, commenced her legal career with a judicial clerkship in the Supreme Court of California. From 1976 to 1979, she worked as a staff attorney at the Legal Aid Society of Alameda County in Oakland, California, where she concentrated on major impact litigation in the areas of disability law and pension law reform. She began teaching at Duke in 1979. She has written extensively on various family law topics, and is coauthor of a family law casebook. She also specializes in gender issues and has written several major articles in that area, as well as a casebook on gender and law and a reader in feminist legal theory. She has held visiting appointments at UCLA and at Boston University. From 1993 to 1995, she served as senior associate dean for academic affairs. In 1994, she was appointed a reporter for the American Law Institute's *Principles of Family Dissolution*.



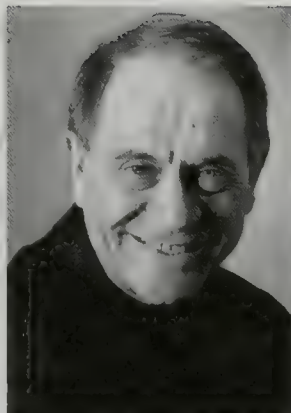
Sara Sun Beale, *Professor of Law*

B.A. 1971, J.D. 1974, University of Michigan. A native of Toledo, Ohio, Professor Beale's experience includes a judicial clerkship on the United States Court of Appeals, as well as a year in private practice in Detroit, Michigan. In 1976 she joined the United States Department of Justice, where she served one year in the Office of Legal Counsel, and two years in the Office of the Solicitor General. She began her teaching career at Duke in 1979, and she has also taught at the University of Michigan. She is the coauthor of *Grand Jury Law and Practice* (1986) and *Federal Criminal Law* (2d ed. 1993). Her principal academic interests are in the field of criminal law and procedure. She began service as senior associate dean for academic affairs in January 1997.



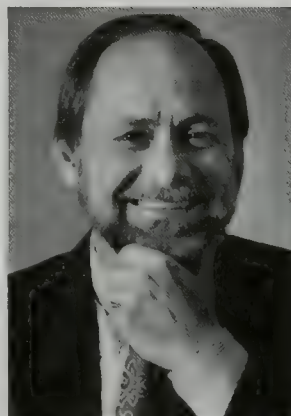
Herbert L. Bernstein, *Professor of Law*

LL.B. 1953, Dr. jur. 1962, Hamburg University, Germany; J.D. 1967, University of Michigan. A native of Germany, Professor Bernstein practiced as a junior lawyer until 1958 and as a regular member of the bar thereafter. Simultaneously, he was a research and teaching assistant at Hamburg University from 1956 to 1960. Since 1958 he has also been affiliated with the Max-Planck Institute of Foreign and Private International Law. He taught at the University of California from 1967 to 1971; then returned to Hamburg University as professor of law. After a previous visit, he came to Duke from Hamburg in 1984. His teaching includes European Union law, contracts, conflict of laws, comparative law, insurance, and international organizations. He is the author of numerous books and articles on diverse subjects in the fields of international law, conflict of laws, insurance, and business law.



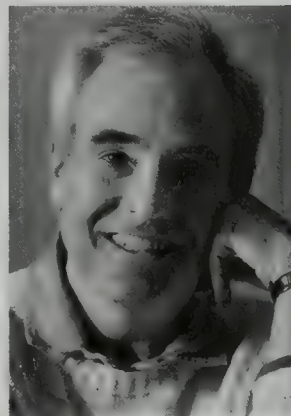
Michael H. Bradley, *F.M. Kirby Professor of Investment Banking and Professor of Law*

A.B. 1969, University of Idaho; M.B.A. 1973, Syracuse University; Ph.D. 1979, University of Chicago. Professor Bradley came to Duke from the University of Michigan where he had appointments at the law and business schools. He has also served on the faculties of the Universities of Chicago and Rochester. Professor Bradley's teaching and research interests lie at the intersection of corporate finance and corporate law. He has published papers on corporate capital structure, mergers and acquisitions, takeover defenses and tactics, government regulation of the securities market, insider trading, fiduciary duties of corporate managers, corporate governance and corporate bankruptcy. His work has been cited in textbooks, professional journals, and in the decisions of numerous state and federal courts, including the U.S. Supreme Court.



H. Keith H. Brodie, *James B. Duke Professor of Psychiatry and Professor of Law*

A.B. 1961, Princeton University; M.D. 1965, Columbia University. Dr. Brodie served at hospitals in New Orleans and New York City before becoming a clinical associate with the National Institute of Mental Health in 1968. In 1970, he joined the medical faculty of Stanford University. He was given the William C. Menninger Award by the American College of Physicians in 1994. Dr. Brodie is a member of the Institute of Medicine of the National Academy of Sciences. He came to Duke in 1974 as professor and chairman of the Department of Psychiatry and director of Psychiatric Services at Duke University Medical Center. He has also served as president of the American Psychiatric Association. His book, *Modern Clinical Psychiatry*, published in 1982, has been translated into four languages. Recently, Dr. Brodie has served as chair of the Institute of Medicine Committee on Substance Abuse and Mental Health Issues in AIDS Research and co-editor of the Committee's report, *AIDS and Behavior: An Integrated Approach*, 1994. He was first appointed to the law faculty in 1982. He served as president of Duke University from 1985 to 1993.



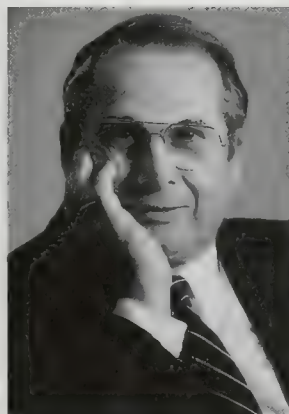
Paul D. Carrington, Harry R. Chadwick, Sr., Professor of Law

B.A. 1952, University of Texas; LL.B. 1955, Harvard University. Professor Carrington is a native of Dallas, Texas. His professional experience includes a brief stint in private practice in Dallas and in a military law office, as well as occasional work for the American Civil Liberties Union and the American Association of University Professors. Since his teaching career began in 1957, he has taught in nearly a score of law schools in the U.S. and abroad. He was the dean at Duke from 1978 to 1988. He has been active in judicial law reform efforts, particularly in regard to appellate courts and procedure. He has published in the fields of civil procedure, education law, and legal education. From 1985 to 1992, he served as reporter for the Committee of the Judicial Conference of the United States which advises the Conference and the Supreme Court on changes in the Federal Rules of Civil Procedure. He is chair of the board of the Law School's Private Adjudication Center. He teaches civil procedure and international dispute resolution.



George C. Christie, James B. Duke Professor of Law

A.B. 1955, J.D. 1957, Columbia University; S.J.D. 1966, Harvard University. A native of New York City, Professor Christie was editor-in-chief of the *Columbia Law Review*. He commenced his legal career with private practice in Washington, D.C. In 1960-61, he was a Ford Fellow at Harvard Law School; and in 1961-62, he was a Fulbright Scholar at Cambridge University, where he earned a diploma in international law. He then joined the law faculty of the University of Minnesota, where he taught for almost four years. In 1966, he returned to Washington to serve as assistant general counsel for the Near East and South Asia of the Agency for International Development before coming in 1967 to Duke. His chief academic interests are in the areas of torts and jurisprudence, in both of which he has published widely. He is the editor of a casebook in jurisprudence published in 1973, and now in its second edition, and one on torts first published in 1983, and now in its third edition. His monograph, *Law, Norms and Authority*, was published in 1982. He has been a visiting professor at Northwestern University, George Washington University, the Universities of Michigan, Florida, Otago in New Zealand, Witwatersrand in South Africa, and Fudan University in Shanghai, and a fellow of the National Humanities Center. He is a member of the Board of Editors of *Law and Philosophy*.



Amy L. Chua, Associate Professor of Law

A.B. 1984, J.D. 1987, Harvard University. Professor Chua was executive editor of the *Harvard Law Review* and after graduation clerked for Judge Patricia Wald of the United States Court of Appeals. From 1988 to 1993 she was an associate for a large New York City law firm, working on securities transactions throughout Asia, Latin America and Europe. Professor Chua's current academic interests relate to the link between markets and ethnicity in developing countries. She teaches in the areas of contracts and international business transactions.



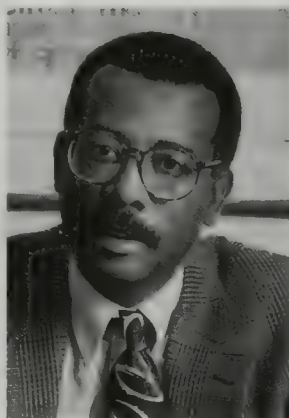
Charles T. Clotfelter, Z. Smith Reynolds Professor of Public Policy Studies, Professor of Economics, Professor of Law

A.B. 1969, Duke University; Ph.D. 1974, Harvard University. Professor Clotfelter is a native of Birmingham, Alabama, and was raised in Atlanta, Georgia. He taught at the University of Maryland from 1974 to 1979, spending his last year there on leave at the U.S. Treasury's Office of Tax Analysis, where he was a Brookings Economic Policy Fellow. In 1979, he took a joint appointment at Duke University, joining both the Institute of Policy Sciences and Public Affairs, and the Economics Department. While at Duke, he has served as vice-provost for academic policy and planning from 1983 to 1985, as vice-chancellor from 1985 to 1988, and as vice-provost for academic programs from 1993 to 1994. He has also served as president of the Southern Economic Association. Professor Clotfelter is also the director of the Center for the Study of Philanthropy and Voluntarism at Duke and is a research associate of the National Bureau of Economic Research. His major research interests are in public finance, tax policy, the economics of education, and the nonprofit sector. He is the author of several books, the most recent of which is *Buying the Best: Cost Escalation in Elite Higher Education* (1996).



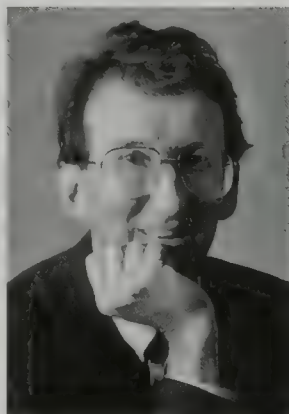
James E. Coleman, Jr., Professor of Law

A.B. 1970, Harvard University; J.D. 1974, Columbia University. A native of Charlotte, North Carolina, Professor Coleman's experience includes a judicial clerkship for the U.S. District Court for the Eastern District of Michigan, a year in private practice in New York, and fifteen years in private practice in Washington, D.C., the last twelve as a partner in a large law firm. In private practice, he specialized in federal court and administrative litigation; he also represented criminal defendants in capital collateral proceedings. He has had a range of government experience. In 1976, he joined the Legal Services Corporation, where he served for two years as an assistant general counsel. In 1978, he conducted an investigation of two members of Congress as chief counsel for the U.S. House of Representatives' Committee on Standards of Official Conduct. In 1980, he served as a deputy general counsel for the U.S. Department of Education. On sabbatical from his law firm, he was a visitor at Duke Law School for the fall semester of 1989, where he taught a seminar on capital punishment. He joined the faculty full-time in 1991 and taught criminal law, research and writing, and a seminar on capital punishment. He returned to private practice in 1993, but continued to teach a seminar on capital punishment as a senior visiting lecturer. He rejoined the faculty full-time in 1996.



James D. Cox, Professor of Law

B.S. 1966, Arizona State University; J.D. 1969, University of California, Hastings College of the Law; LL.M. 1971, Harvard University. Professor Cox is a native of Ellinwood, Kansas. He entered law teaching as a teaching fellow at Boston University, and has since taught at the University of San Francisco, Stanford University, and the University of California, Hastings College of the Law, before coming to Duke in 1979. He has focused his writing and teaching in the areas of corporate and securities law. Professor Cox is the author of a book on the utilization of financial information in the regulation of public corporations, a 1995 multi-volume treatise on corporate law, and a casebook on securities regulations published in 1991. He spent the spring semester of 1989 as a Senior Fulbright Research Fellow at the University of Sydney.



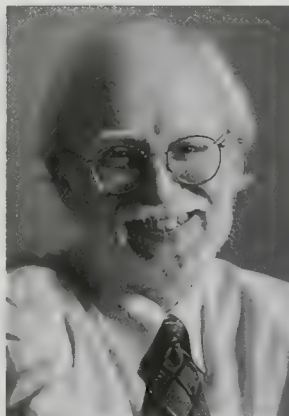
Jerome M. Culp, Jr., Professor of Law

A.B. 1972, University of Chicago; A.M. 1974, J.D. 1978, Harvard University. Professor Culp is a native of Clarksville, Pennsylvania. While in law school he served as senior editor of the *Harvard Civil Rights-Civil Liberties Law Review*. His experience includes a research fellowship with the Rockefeller Foundation and a judicial clerkship in the U.S. Court of Appeals. He came to Duke from Rutgers in 1985, and in 1987 was a distinguished scholar at the Joint Center for Political Studies in Washington, D.C. He has also taught at the University of Michigan, the University of California, Berkeley, and NYU Law School. His principal work to date is in the area of employment discrimination and economic analysis of law. He teaches torts, labor law, employment discrimination, and a seminar on black legal scholarship. In 1991-92, he was on sabbatical leave, in residence at New York University and as John M. Olin Fellow in Law and Economics at the University of California at Berkeley.



Richard A. Danner, Research Professor of Law

B.A. 1969, M.S. 1975, J.D. 1979, University of Wisconsin-Madison. Professor Danner is a native of Wisconsin, who served as environmental law librarian at the University of Wisconsin-Madison, prior to coming to Duke as associate law librarian in 1979. He became director of the Law Library in 1981 and associate dean for library and computing services in 1993. He teaches a seminar in legislation, as well as legal research and writing. He has published articles in journals of law, law librarianship, and library science. He has published two books, *Legal Research in Wisconsin* (1980) and *Strategic Planning: A Law Library Management Tool* (1991) and is the coeditor of *Introduction to Foreign Legal Systems* (1994). From 1984-94, he was editor of the American Association of Law Libraries' *Law Library Journal*. He is active in the affairs of AALL, the ABA Section on Legal Education and Admission to the Bar, AALS, and has served as president of the southeastern chapter of AALL (1985-86) and president of the AALL (1989-90).



Walter E. Dellinger III, Douglas Blount Maggs Professor of Law

A.B. 1963, University of North Carolina; LL.B. 1966, Yale University. Professor Dellinger is a native of Charlotte, North Carolina. He taught political and civil rights at the University of Mississippi from 1966 to 1968. In 1968-69, he served as a judicial clerk in the Supreme Court of the United States. He joined the Duke law faculty in 1969, serving as associate dean from 1974 to 1976 and as acting dean from 1976 to 1978. He has also taught at the University of Southern California, the University of Michigan, and the Catholic University of Leuven, Belgium. He teaches constitutional law and history, and in 1988-89 was a fellow of the National Humanities Center. From 1993 to 1996 he was on leave of absence serving as assistant attorney general, Office of Legal Counsel, at the Department of Justice. He served as acting solicitor general of the United States from July 1996 to July 1997. He returns to the faculty full-time in fall 1997.



Deborah A. DeMott, Professor of Law

B.A. 1970, Swarthmore College; J.D. 1973, New York University. Professor DeMott spent her early years in DuBois, Pennsylvania. She served as articles editor of the *New York University Law Review*. She began her professional career with a judicial clerkship in a federal court in New York City, and later practiced with a large law firm in that city, until she joined the Duke law faculty in 1975. In 1989, she received the Scholar/Teacher of the Year Award from Duke University. She has also taught as a visiting professor at several other law schools in the United States, Canada, and Australia. In 1986 she was a Fulbright Senior Scholar at Sydney and Monash Universities in Australia. She is a member of the North Carolina General Statutes Commission. She is the author of a treatise, *Shareholder Derivative Actions*, published in 1987 and a casebook, *Fiduciary Obligation, Agency and Partnership*, published in 1991. Her other writing concerns corporate law, takeovers and acquisitions, and fiduciary obligation. In 1995, the American Law Institute appointed her the Reporter for its new Restatement of Agency.



Robinson O. Everett, Professor of Law

A.B. 1947, J.D. 1950, Harvard University; LL.M. 1959, Duke University. Professor Everett is a native of Durham, North Carolina. He served for several years as a legal officer in the Air Force and as a commissioner of the United States Court of Military Appeals. He returned to Durham to enter a general practice, which he continued until 1980 when he ascended to the bench of the United States Court of Military Appeals as chief judge. In September 1990, he retired from this position to become a senior judge of the court and resume full-time teaching. From 1961 to 1964, he served as counsel to the Subcommittee on Constitutional Rights of the United States Senate Judiciary Committee. He has been active in the affairs of the North Carolina Bar, the American Bar Association, and of the community of Durham. He has long served as a commissioner on Uniform State Laws, is a life member of the American Law Institute, and has been active in various law reform efforts. He has published on many legal topics, most notably military justice and criminal procedure. His teaching at Duke began as early as 1950. He was elected to regular membership on the faculty in 1967. In 1993, he founded the Center on Law, Ethics, and National Security at the Law School.



Karla Fischer, Assistant Professor of Psychology and Assistant Professor of Law

B.S. 1985, Lewis and Clark College; M.A. 1987, J.D. 1992, Ph.D. 1992, University of Illinois. Professor Fischer joined the Duke University psychology faculty in 1992 and accepted a joint appointment with the Law School in 1993. Her major interests are in the psychological effects of individual participation in the legal system, victimology, as well as gender and social policy.



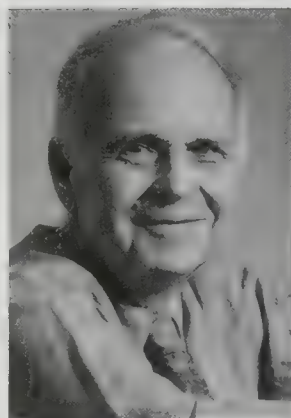
Peter G. Fish, Professor of Political Science and Professor of Law

A.B. 1960, Princeton University; A.M. 1965, Ph.D. 1968, The Johns Hopkins University. Professor Fish has served as guest scholar at the Brookings Institution and taught at Oberlin and Princeton before coming to Duke in 1969. He is author of *The Politics of Federal Judicial Administration* (1973) and *The Office of the Chief Justice* (1984). From 1977-79 Professor Fish served as a lay member of the United States Circuit Judge Nomination Commission, Panel for the Fourth Circuit. He teaches a seminar on the development of the United States Courts of the Fourth Circuit: 1789-1958.



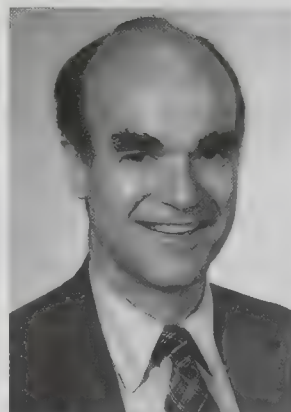
Stanley E. Fish, Professor of English and Professor of Law

B.A. 1959, University of Pennsylvania; M.A. 1960, Ph.D. 1962, Yale University. Professor Fish taught at the University of California, the University of Southern California, and The Johns Hopkins University before coming to Duke in 1985. His principal field has been the study of Milton; this interest evolved to produce important work on literary theory and his widely noted books, *Is There A Text in This Class?*, *Doing What Comes Naturally*, and *There's No Such Thing as Free Speech*; and *It's a Good Thing, Too*. He has contributed to the application of literary theory to law and has written for legal publications. He teaches a seminar on interpretive theory which is presented to students of the humanities as well as law, and has also co-taught the class in contracts. In the past three years he has developed a new course in the relationship of liberalism to First Amendment jurisprudence. His most recent book is *Professional Correctness: Literary Studies and Political Change* (1995). In 1994, Professor Fish assumed duties as the executive director of the Duke University Press and associate vice-provost.



Joel L. Fleishman, Professor of Law and Public Policy Sciences

A.B. 1955, J.D. 1959, M.A. (Drama) 1959, University of North Carolina; LL.M. 1960, Yale University. Professor Fleishman is a native of Fayetteville, North Carolina. He began his career in 1960 as assistant to the director of the Walter E. Meyer Research Institute of Law at Yale. From 1961 to 1965, he served as legal assistant to the governor of North Carolina. He then returned to Yale, first as director of the Yale Summer High School, and then as associate provost for Urban Studies and Programs. In 1969, he became associate chairman of the Center for the Study of the City and Its Environment and associate director of the Institute of Social Science at Yale. In 1971, he came to Duke as a member of the law faculty and as director of the Institute of Policy Sciences and Public Affairs. In addition to his appointments as professor of law and public policy, he also serves as director of the Samuel and Ronnie Heyman Center for Ethics, Public Policy and the Professions in the Terry Sanford Institute of Public Policy. His principle writings deal with legal regulation and financing of political activities, and he hopes soon to complete a book on ethics in politics.



Koichiro Fujikura, Adjunct Professor of Law

B.A. 1957, Doshisha University; B.A. 1961, Amherst College; LL.M. 1962, Northwestern University; LL.M. 1963, Harvard University. Professor Fujikura returned to Japan after his four years of study in the United States, where he joined the faculty of Doshisha, serving as dean of the law faculty there before moving to the University of Tokyo in 1981; he is currently professor of law at Waseda University in Tokyo. He has also taught at California, Harvard, and Michigan. Among his writings is a book published in English, *Environmental Law in Japan* (1981). He visits Duke in alternate years to teach Japanese environmental law and legal systems.



Pamela B. Gann, Professor of Law

B.A. 1970, University of North Carolina; J.D. 1973, Duke University. A native of Monroe, North Carolina, Professor Gann was articles editor of the *Duke Law Journal*. She practiced with private firms in Atlanta and Charlotte before returning to Duke to teach in 1975. She has also taught at Washington University and the Universities of Michigan, Virginia, Colorado, and San Diego. She is the coeditor of a 1989 casebook on corporate taxation. Her writing is primarily in the areas of taxation and international investment. In 1984, her work was supported by the Council on Foreign Relations, of which she is now a member. She began service as dean of the Law School in 1988.



Xi-Qing Gao, Adjunct Professor of Law

B.A. 1978, LL.M. 1981, University of International Business and Economics; J.D. 1986, Duke University. Professor Gao is a native of Xian, People's Republic of China. He was a lecturer of international trade law in the Beijing Institute of Foreign Trade before coming to the United States in 1982 to work for an American law firm. After graduating from Duke Law School in 1986, he was an associate for a large New York City law firm, before returning to China in 1988 to develop a securities market. He served as the general counsel and director of public offerings of the China Securities Regulatory Commission from 1992 to 1995 and is now a professor of law at the University of International Business and Economics. He publishes in the areas of Chinese securities law, banking, and antitrust, and is a member of various international arbitration associations. Professor Gao returns to the Law School each year to teach a course on international business transactions with China and Chinese securities law.



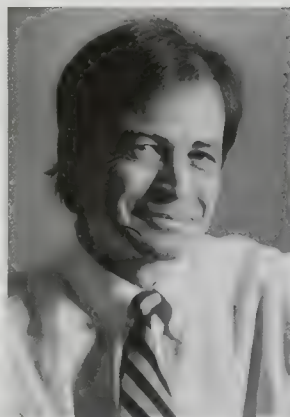
Martin P. Golding, Professor of Philosophy and Professor of Law

B.A. 1949, M.A. 1952, University of California, Los Angeles; Ph.D. 1959, Columbia University. A native of New York City, Professor Golding taught at Columbia University from 1957 to 1970 and at the John Jay College of Criminal Justice of the City University of New York from 1970 to 1976 before coming to Duke in 1976 as professor and chairman of the Department of Philosophy, where he remains as professor. He has also taught at New York University, Bar-Ilan University in Israel, and the Universities of California (both Berkeley and Los Angeles), Southern California, and Colorado. His writing includes three books, *The Nature of Law* (1966), *Philosophy of Law* (1975; Japanese translation 1985; Chinese translation 1988), and *Legal Reasoning* (1984), and numerous articles on jurisprudence and ethics. He is the editor of *Jewish Law and Legal Theory* (1994). Professor Golding was senior visiting Fulbright lecturer in Australia and has been a fellow of the National Humanities Center.



Paul H. Haagen, Professor of Law

B.A. 1972, Haverford College; B.A. 1974, M.A. 1976, Oxford; M.A. 1976, Ph.D. 1986, Princeton; J.D. 1982, Yale. Professor Haagen was born in Lancaster, Pennsylvania and raised in Connecticut. After graduating from college, he studied history first at Oxford as a Rhodes Scholar, and later at Princeton, where he also taught. In law school, he was an editor of *Yale Studies in World Public Order* and editor-in-chief of the *Yale Law and Policy Review*. Since law school, he has clerked on the United States Court of Appeals and then practiced law in Philadelphia for two years before coming to Duke in 1985. His principal academic interests are legal history and international law. He was senior associate dean for academic affairs from 1991 to 1993.



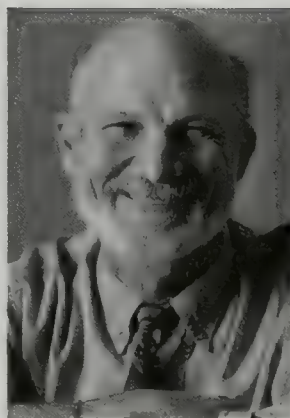
Guy Haarscher, Adjunct Professor of Law

J.D. 1971; Ph.D. 1977, Université Libre de Bruxelles. Professor Haarscher is a native of Brussels and has always lived and worked in that city. He is ordinary professor of philosophy and law and director of the Center for the Philosophy of Law at his university. He is secretary general of the Chaim Perelman Foundation and the vice-dean of the faculty of humanities at the ULB. He was a visiting fellow at the Australian National University, and teaches at the Central European University in Budapest and at the European Academy for the Theory of Law in Brussels. He has lectured in various universities, particularly in the United States, and attended many congresses and symposia around the world. Professor Haarscher is the author of several books including: *L'Ontologie de Marx* (1980), *Egalite et Politique* (1982), *Philosophie des Droits de l'Homme* (1987, 4th edition 1994), *La Raison du plus Fort* (1988), and *La laïcité* (1996). He received the prize of the Belgian Academy in 1981 for his book on Marx and the prize of the French Speaking Community of Belgium in 1989 for his book on human rights. He has written many articles on topics related to political philosophy, philosophy of law and general contemporary philosophy. At Duke, he teaches a course on law and political philosophy in alternating years.



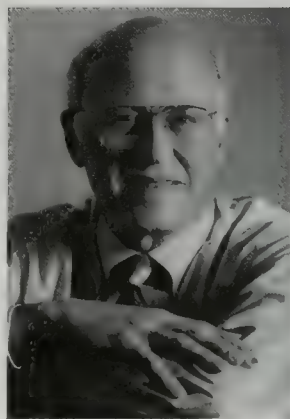
Stanley Hauerwas, Gilbert T. Rowe Professor of Legal Ethics and Professor of Law

B.A. 1962, Southwestern University; B.D. 1965, M.A., M.Phil., Ph.D. 1968, Yale University. Prior to coming to Duke Divinity School in 1984, Professor Hauerwas taught at Augustana College from 1968 to 1970 and at the University of Notre Dame from 1970 to 1984. While at Notre Dame he was a visiting professor at a number of other American universities. At Duke, Professor Hauerwas is a professor in the Divinity School. He began his association with the Law School in 1988. His primary research interests are in the field of ethics, and his most recent books are *Unleashing the Scripture: Freeing the Bible from Captivity to America* (1993) and *Dispatches from the Front: Theological Engagement with the Secular* (1994).



Clark C. Havighurst, William Neal Reynolds Professor of Law

A.B. 1955, Princeton University; J.D. 1958, Northwestern University. Professor Havighurst is a native of Evanston, Illinois. He spent two years in military service, one year as a research associate at Duke, and three years in private law practice in New York City before beginning his teaching career at Duke in 1964. Professor Havighurst was for five years the editor of *Law and Contemporary Problems*. In addition to teaching antitrust law, he has a special academic interest in the field of health care law and in national health policy. His book, *Deregulating the Health Care Industry*, was published in 1982, and his casebook, *Health Care Law and Policy*, appeared in 1988. A new book, *Health Care Choices: Private Contracts as Instruments of Health Reform*, was published in 1995. Professor Havighurst has served as scholar-in-residence at, and is a member of, the Institute of Medicine of the National Academy of Sciences. He has also been a resident consultant to the Federal Trade Commission and to the law firm of Epstein, Becker & Green, both in Washington, D.C., and is an adjunct scholar of the American Enterprise Institute. He has also taught at Stanford, Northwestern, Michigan, and William and Mary.



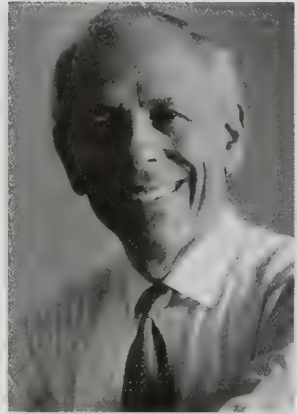
Cynthia B. Herrup, Professor of History and Professor of Law

B.S.J. 1972, Northwestern University; M.A. 1975, Loyola University (Chicago); Ph.D. 1982, Northwestern University. Professor Herrup is a native of Miami, Florida. Prior to coming to the Department of History at Duke in 1984, Professor Herrup taught for three years at the University of Michigan. From 1985 to 1988, she had a concurrent appointment at Duke Law School as lecturer in legal history, teaching courses in the history of English criminal law. Her 1985 essay, "Law and Morality in Seventeenth-Century England" won the Walter D. Love prize of the North American Conference on British Studies. In 1987, Cambridge University Press published her book, *The Common Peace? Participation and the Criminal Law in Seventeenth-Century England*. In 1988, Professor Herrup was appointed associate professor of history and law in the Law School. From 1988-91 she was on the board of directors of the American Society for Legal History. Since 1993, she has been on the editorial board of *Law & History Review*. She has held fellowships from the American Association of University Women, Fulbright-Hays, the National Endowment for the Humanities, and the John Simon Guggenheim Memorial Foundation. Her principal research interests are in the area of criminal law in preindustrial societies and the social and intellectual history of ideas of crime and punishment. She teaches history of English criminal law.



Donald L. Horowitz, James B. Duke Professor of Law and Political Science

A.B. 1959, LL.B. 1961, Syracuse University; LL.M. 1962, M.A. 1965, Ph.D. 1968, Harvard University. Professor Horowitz began his career as a law clerk in the United States District Court. With the exception of a stint as a government lawyer before joining Duke, he was engaged in research at the Harvard Center for International Affairs, the Woodrow Wilson Center, the Brookings Institution, and the Smithsonian Institution. A recipient of a Guggenheim fellowship, he has published *The Jurocracy*, a book about government lawyers, *The Courts and Social Policy*, for which he was awarded the Louis Brownlow Prize of the National Academy of Public Administration in 1977, and *Ethnic Groups in Conflict* (1985). Professor Horowitz came to Duke in 1981 and has served as a fellow of the National Humanities Center, a visiting fellow at Wolfson College, Cambridge, and a visiting professor at the University of Chicago Law School. His most recent book is *A Democratic South Africa? Constitutional Engineering in a Divided Society* (1991), which won the 1992 Ralph J. Bunche Prize for the best book in ethnic and cultural pluralism. In 1993, Professor Horowitz was elected a fellow of the American Academy of Arts and Sciences. In 1995-96, he was a visiting scholar at the University of Canterbury Law School in New Zealand. His most recent published work is on Islamic law and the theory of legal change.



Trina Jones, Associate Professor of Law

B.A. 1988, Cornell University; J.D. 1991, University of Michigan. Professor Jones is a native of Rock Hill, South Carolina. During law school, she served as articles editor for the *Michigan Law Review*. From 1991 to 1995, she was an associate in a large Washington, D.C. law firm, working in general litigation. Professor Jones joined the faculty in 1995 and teaches civil procedure and employment discrimination. Her academic interests also include legal ethics and race and gender issues.



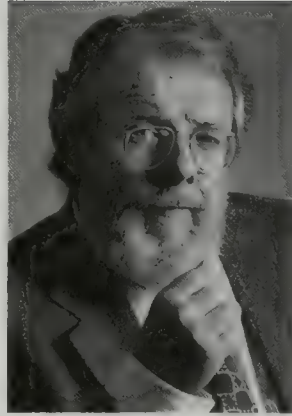
Benedict W. Kingsbury, Professor of Law

LL.B. 1981, University of Canterbury; M.Phil. (International Relations) 1984, D.Phil. (Law) 1990, Oxford University. Professor Kingsbury was raised in New Zealand, where he qualified as a barrister and solicitor. After three years as a Rhodes Scholar at Balliol College, Oxford, he began his career as a research fellow in law at Oxford, where he became a permanent member of the law faculty in 1990. He was a visiting professor at Duke in 1992, and moved to Duke full-time in 1993. He has a continuing association with the Oxford Law Faculty as a visiting senior research fellow, and was awarded a research fellowship by NYU Law School in 1995. He has also been a visiting professor at Cornell Law School and the University of Padua. Professor Kingsbury's research and teaching interests are in the areas of public international law, international legal theory, international human rights, international environmental law, and international organizations. He has edited and contributed to *United Nations, Divided World* (1988, 2d ed. 1993), *Hugo Grotius and International Relations* (1990), *The International Politics of the Environment* (1992), and *Indigenous Peoples of Asia* (1995). He provides international law advice to various environmental and human rights groups, and is on leave for 1997-98.



David L. Lange, Professor of Law

B.S. 1960, LL.B. 1964, University of Illinois. Professor Lange practiced law with a Chicago firm that included media enterprises among its clients. He has also had substantial professional experience in radio, television, cable, and motion picture production, and has served as a member of the Governing Committee of the ABA Forum on the Entertainment and Sports Industries. He joined the Duke law faculty in 1971, where he has since served as general editor of *Law and Contemporary Problems* and as chairman of the Center for the Study of Communications Policy. His principal academic interests lie in the areas of intellectual property, entertainment, and communications law. He is also of counsel to a law firm with an emphasis in these areas of practice.



William E. Leuchtenburg, Adjunct Professor of Legal History

B.A. 1943, Cornell University; M.A. 1944, Ph.D. 1951, Columbia University. Professor Leuchtenburg holds the Kenan Chair in History at the University of North Carolina and previously held the DeWitt Clinton Chair at Columbia. He has also taught at Smith, Harvard, New York University, and Oxford University, and previously at the Law School. He has been president of the Organization of American Historians and the Society of American Historians, and has recently served as president of the American Historical Association. His field is modern American history with emphasis on the Roosevelt era; his latest books are on the impact of the legacy of Franklin Roosevelt on American presidents from Truman to Clinton, and on the Supreme Court in the age of Roosevelt. He teaches in the area of constitutional history.



Percy R. Luney, Jr., Adjunct Professor of Law

A.B. 1970, Hamilton College; J.D. 1974, Harvard University. Professor Luney devoted a year of study to economic geology in the sub-Sahara as a Thomas J. Watson Fellow and taught that subject for a year at Cornell after completing law school. He thereafter practiced law in the Department of the Interior and with a private firm practicing primarily in the land and resource development area. In 1980, he joined the law faculty of North Carolina Central University, where he now serves as dean. He has been a fellow of the North Carolina Japan Center, and was a visiting scholar at the University of Tokyo in 1983, 1986 (as a Fulbright Scholar), and 1990. He was a Fulbright Lecturer on the Kobe University Faculty of Law in 1991-92. At Duke, he teaches in the area of Japanese law.



Francis E. McGovern, *Professor of Law*

B.A. 1967, Yale University; J.D. 1973, University of Virginia. Professor McGovern is a native of Charlottesville, Virginia. He began his legal career in a large law firm, before joining the faculty at the Cumberland School of Law in Birmingham, Alabama. He has also taught at Boston University School of Law, MIT, Harvard Law School, University of Fribourg (Switzerland), and the University of Alabama School of Law where he was the Francis H. Hare Professor of Torts for ten years. He joined the Duke law faculty in 1997. Professor McGovern is a pioneer in the field of alternative dispute resolution, and especially in the area of mass claim litigation. He has served as a court-appointed special master or neutral expert in dozens of cases, including DDT toxic exposure litigation, the Dalkon Shield controversy, and the silicone gel breast implant litigation. He has worked with the United Nations Compensation Commission to ensure that Iraq compensates for losses suffered in the Persian Gulf War. He is the author of two books, *Successful Litigation Techniques* and *The Preparation of a Product Liability Case*, as well as numerous articles. He teaches in the areas of torts, product liability, mass torts, alternative dispute resolution, and toxic substances litigation.



Thomas B. Metzloff, *Professor of Law*

B.A. 1976, Yale College; J.D. 1979, Harvard University. Professor Metzloff is a native of Buffalo, New York. He began his professional career with a judicial clerkship on the United States Court of Appeals, followed by a clerkship with the Supreme Court of the United States. He then practiced with a private firm in Atlanta before accepting a position at Duke in 1985. He teaches civil procedure and dispute resolution, as well as courses on professional responsibility and professional liability. He also serves as director of the Private Adjudication Center's Medical Malpractice Research Project.



Madeline Morris, *Professor of Law*

B.A. 1986, J.D., 1989, Yale University. A native of New York, Professor Morris commenced her legal career with a clerkship for Judge John Minor Wisdom of the United States Court of Appeals for the Fifth Circuit. She joined the Duke faculty in 1990. Professor Morris' research is in the area of international criminal law including genocide and crimes against humanity as well as crimes by military personnel. She currently serves as advisor on justice to the president of Rwanda, and has served as special consultant to the secretary of the U.S. Army on sexual harassment. Professor Morris is Duke faculty director of the Duke/Geneva Institute in Transnational Law. She teaches criminal law and international criminal law.



Robert P. Mosteller, *Professor of Law*

B.A. 1970, University of North Carolina at Chapel Hill; J.D. 1975, Yale University; M.P.P. 1975, Harvard University. Professor Mosteller is a native of Vale, North Carolina. After serving as a judicial clerk in the Fourth Circuit, he joined the District of Columbia Public Defender Service. During seven years with the Public Defender Service, he was director of training and chief of the trial division. Professor Mosteller came to Duke in 1983, and is the coauthor of a casebook, a problem book, and a treatise on evidence. He teaches criminal procedure, evidence, and related seminars.



Jonathan K. Ocko, *Adjunct Professor of Legal History*

B.A. 1966, Trinity College; M.Phil. 1971, M.A. 1972, Ph.D. 1975, Yale University. A native of New York City, Professor Ocko taught at Clark University and Wellesley College before joining the faculty of North Carolina State University in 1977. He has been a fellow at Harvard Law School and the National Humanities Center and also held fellowships from the Rockefeller, Chiang Ching-kuo, and Luce Foundations. Since publishing *Bureaucratic Reform in Provincial China* in 1983, his research and publications have focused on Chinese legal history and contemporary Chinese civil law. His present work deals with traditional concepts of justice, mediation in Chinese culture, and the concept of contract in Chinese economic culture. In 1983, he was appointed to a part-time professorial position in the Law School.



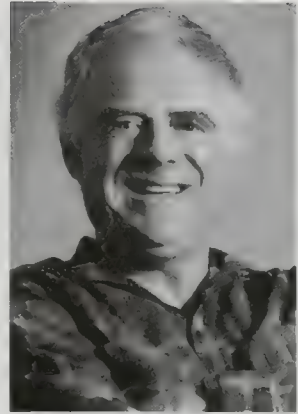
H. Jefferson Powell, *Professor of Law and Divinity*

B.A. 1975, University of Wales; M.Div. 1979, J.D. 1982, Yale University; A.M. 1977, Ph.D. 1991, Duke University. A native of Reidsville, North Carolina, Professor Powell clerked for the Honorable Sam J. Ervin III of the Fourth Circuit. He began teaching at the University of Iowa in 1984 and returned to Duke in 1987 to complete his doctorate in theological ethics. In the fall of 1989, Professor Powell joined the permanent faculty of the Law and Divinity Schools. At the Law School, he teaches contracts and constitutional history. From 1991-93 he was special counsel to the attorney general of North Carolina and from 1993-94 and 1996, he served in the U.S. Department of Justice as a deputy assistant attorney general and later as deputy solicitor general.



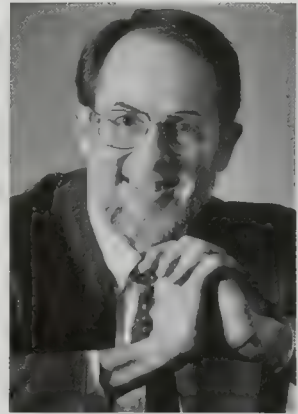
William A. Reppy, Jr., *Charles L.B. Lowndes Professor of Law*

A.B. 1963, J.D. 1966, Stanford University. Professor Reppy is a native of Oxnard, California. He commenced his professional career with two judicial clerkships—one in the Supreme Court of California, followed by another in the Supreme Court of the United States. He then practiced law for three years with a private firm in Los Angeles, until joining the Duke law faculty in 1971. He has also taught at the Universities of California, Michigan, Washington, and North Carolina. His principal scholarly work is in the areas of marital property rights and conflict of laws. He is a frequent consultant to the California Law Revision Commission on community property and succession law. He does pro bono legal work for the humane and animal rights movements.



Thomas D. Rowe, Jr., *Elvin R. Latty Professor of Law*

B.A. 1964, Yale University; M.Phil. 1967, Oxford University; J.D. 1970, Harvard University. A native of Ann Arbor, Michigan, Professor Rowe achieved preeminent academic records both as an undergraduate and as a law student; in the interim, he was also a Rhodes Scholar. He commenced his professional career as a law clerk in the Supreme Court of the United States. He served for one and one-half years as assistant counsel to a subcommittee of the U.S. Senate Judiciary Committee and then practiced law with a private firm in Washington, D.C. He joined the Duke law faculty in 1975 and served as associate dean from 1981 to 1984. He has also taught at Georgetown, Michigan, and Virginia, and on leaves from Duke has served with the U.S. Department of Justice in Washington and worked as an attorney with a private firm in Los Angeles. He has written in the fields of civil procedure, complex litigation, judicial remedies, and constitutional law. In 1995-96, he served as senior associate dean for academic affairs.



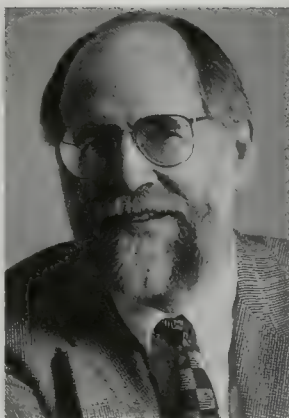
Richard L. Schmalbeck, *Professor of Law*

B.A. 1970, J.D. 1975, University of Chicago. A native of Chicago, Professor Schmalbeck was associate editor of the *University of Chicago Law Review*. After brief service as special assistant to the associate director of the Office of Management and Budget, he practiced law with a firm in Washington, D.C., specializing in federal tax law. He began his teaching career at Duke in 1980, where his focus is on the fields of federal taxation and law and economics. He has been a visiting professor at the University of Michigan and Northwestern University, and served as dean of the College of Law of the University of Illinois from 1990 to 1993.



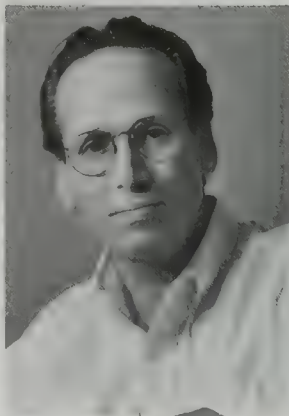
Christopher H. Schroeder, Professor of Law and Public Policy

B.A. 1968, Princeton University; M.Div. 1971, Yale University; J.D. 1974, University of California. Professor Schroeder is a native of Saginaw, Michigan. He served as editor-in-chief of the *California Law Review*. He practiced law with a San Francisco firm for two years before organizing a smaller firm in that city, where he engaged in environmental litigation in addition to a general litigation practice. He joined the Duke law faculty in 1979, and has also taught at UCLA and Boston University. He teaches in the fields of environmental law, property, administrative law, and the Congress. During the fall 1992 semester, he was on leave serving as acting chief counsel of the U.S. Senate Judiciary Committee. For the 1996 fall semester, he served as assistant attorney general in the Office of Legal Counsel, U.S. Department of Justice.



Steven L. Schwarcz, Professor of Law

B.S. 1971, New York University School of Engineering and Science; J.D. 1974, Columbia University. Professor Schwarcz was born and raised in the New York metropolitan area. After graduating first in his class in engineering school, majoring in aeronautics and astronautics, he worked on legislative initiatives involving science and law while attending law school. Prior to joining Duke in 1996, he was a partner and practice group chairman at two major New York law firms, where he represented many of the world's leading banks and other financial institutions in structuring innovative capital market financing transactions, both domestic and international. While practicing law, he taught courses in bankruptcy, corporate re-organization, commercial law, and structured finance at Yale, Columbia and Cardozo (Yeshiva University) Law Schools. He also has written numerous scholarly works in these areas, and his monograph, *Structured Finance, A Guide to the Principles of Asset Securitization* (3rd edition forthcoming), is the most widely used book in the field of inventive commercial finance. He has been an adviser to the United Nations on international receivables financing, and is a fellow of the American College of Commercial Finance Lawyers. In 1996, he gave the Benjamin Weintraub Distinguished Professorship Lecture at Hofstra University School of Law.



Martin J. Stone, Professor of Law and Professor of Philosophy

B.A. 1982, Brandeis University; J.D. 1985, Yale University; B.Phil. 1988, Oxford University; Ph.D. 1996, Harvard University. Professor Stone began his undergraduate education at the University of California, Berkeley, transferring to Brandeis after two years. Following completion of his J.D. in 1985, Professor Stone was a Marshall Scholar at Balliol College, Oxford University where he completed the B.Phil. in philosophy in 1988. He completed the Ph.D. in philosophy at Harvard University in 1996. His research interests center on Wittgenstein, philosophical logic, and political philosophy. His teaching interests include tort law and philosophy of law.



Laura S. Underkuffler, Professor of Law

B.A. 1974, Carleton College; J.D. 1978, William Mitchell College of Law; LL.M. 1987, J.S.D. 1994, Yale Law School. A native of New Jersey, Professor Underkuffler began her legal career with a clerkship in the Eighth Circuit Court of Appeals. She practiced law for six years with a large Minneapolis litigation firm, where she was head of the appellate department from 1983-85. In 1983, she was appointed to the Advisory Committee for the Eighth Circuit Court of Appeals where she served until 1986. She was an attorney with the Minnesota State Public Defender's office for one year, before returning to Yale for graduate study in 1986. At Yale, she was assistant to the dean, research fellow, and tutor in law. Her teaching interests include property, property theory, federal courts, and the administration of criminal justice. She served as special counsel in the U.S. Senate in 1991-92, and was a fellow at the Woodrow Wilson International Center for Scholars in 1993.



William W. Van Alstyne, William R. Perkins and Thomas C. Perkins
Professor of Law

B.A. 1955, University of Southern California; J.D. 1958, Stanford University; LL.D. (Hon.) 1976, Wake Forest University; LL.D. (Hon.) 1979, College of William and Mary. A native of California, Professor Van Alstyne was professionally employed first by the California Department of Justice and then by the United States Department of Justice. He began his teaching career at Ohio State University in 1959, coming to Duke in 1965. He has taught at a number of other law schools, including Stanford, the University of California (at Berkeley and at Los Angeles), the Universities of Chicago, Illinois, and Pennsylvania, and in Europe, China, Japan, and Latin America. He studied at the Hague Academy of International Law in 1961 and was a senior fellow at Yale in 1964-65. He has been especially active in the American Association of University Professors, serving as president in 1975-76. He is known for his writing and his speaking on the subject of constitutional law, appearing regularly in House and Senate proceedings and in briefs for the U.S. Supreme Court.



Neil Vidmar, Russell M. Robinson, II Professor of Law and Professor of Psychology: Social and Health Sciences

A.B. 1962, MacMurray College; M.A. 1965, Ph.D. 1967, University of Illinois. Professor Vidmar was raised and educated in Illinois, but moved to Canada in 1967, after completing his graduate work. He taught in the Department of Psychology and the School of Law at the University of Western Ontario until joining the Duke Law faculty in 1989. He has also been engaged in research or teaching during leaves at Yale Law School, the Battelle Seattle Research Center, and Osgoode Hall Law School. He is a former trustee and treasurer of the Law and Society Association. He serves on the editorial boards of a number of law and society publications and as a consultant to legal, scientific, and government organizations in the United States and Canada. Professor Vidmar is the coauthor of *Judging the Jury* (1986), and author of *Medical Malpractice and the American Jury* (1995). He has written articles dealing with both the civil and criminal justice system. He offers instruction in social science evidence in law, the psychology of the litigation process, negotiation, and the contemporary American jury.



John C. Weistart, Professor of Law

A.B. 1965, Illinois Wesleyan University; J.D. 1968, Duke University; LL.D. (Hon.) 1981, Illinois Wesleyan University. Professor Weistart was editor-in-chief of the *Duke Law Journal*. He served for a year as a judicial clerk on the Supreme Court of Illinois before joining the Duke law faculty in 1969. He served for three years as editor of *Law and Contemporary Problems* and as American editor of the *Journal of Business Law*, and is a member of the American Law Institute. He has also taught at the Universities of California at Los Angeles, Virginia, Harvard, Michigan, and Denver. He is known for his writing in the field of commercial law, and has served as a consultant to the Federal Trade Commission and the Federal Reserve Board. He is also a frequent commentator on issues in the athletics industry.



Jonathan B. Wiener, Associate Professor of Law and Associate Professor of Environment

A.B. 1984, J.D. 1987, Harvard University. During law school, Professor Wiener was an editor of the *Harvard Law Review*, and helped coach the national collegiate debate champions. After law school he clerked for Judge Jack Weinstein of the U.S. District Court, and then for Judge Stephen Breyer on the U.S. Court of Appeals. He then served as special assistant to the assistant attorney general heading the Environment and Natural Resources Division, Department of Justice; as policy counsel at the Office of Science and Technology Policy, Executive Office of the President; as senior staff economics/attorney at the President's Council of Economic Advisors; and as an advisor to the new Americorps National Service Program. He came to Duke in 1994. His policy work and writing have addressed topics including climate change, forests conservation, risk, biotechnology, mass torts, and incentives in regulation and litigation. Recent publications include *Risk vs. Risk* (Harvard Univ. Press 1995) and "Law and the New Ecology," 22 *Ecol. L.Q.* 325 (1995). He attended the Rio Earth Summit in 1992. Professor Wiener has also helped organize several community service events including the Law School's annual "Dedicated to Durham" day. He teaches in the areas of environmental law, risk regulation, mass torts, and property.



Visiting Faculty

Margaret Howard, *Visiting Professor of Law (Vanderbilt University)*

Noboru Kashiwagi, *Visiting Professor of Law (University of Tokyo)*

Marc L. Miller, *Visiting Professor of Law (Emory University)*

Extended Faculty

Catherine Adcock, *Lecturing Fellow*

Cynthia Adcock, *Lecturing Fellow*

Robert A. Beason, *Senior Lecturing Fellow*

Charles L. Becton, *Senior Lecturing Fellow*

Gregory J. Bendlin, *Lecturing Fellow*

Mark P. Bernstein, *Senior Lecturing Fellow*

Waltraud R. Bernstein, *Senior Lecturing Fellow*

Donald H. Beskind, *Senior Lecturing Fellow*

Stanley F. Birch, *Senior Lecturing Fellow*

Scott A. Cammarn, *Lecturing Fellow*

Doriane Lambelet Coleman, *Lecturing Fellow*

Jeffrey C. Coyne, *Senior Lecturing Fellow*

Jasper L. Cummings, Jr., *Senior Lecturing Fellow*

Hampton Y. Dellinger, *Lecturing Fellow*
 Diane Dimond, *Senior Lecturing Fellow*
 Thomas Dean Domonoske, *Lecturing Fellow*
 Melanie Dunshee, *Senior Lecturing Fellow*
 René Stemple Ellis, *Senior Lecturing Fellow*
 Sam J. Ervin III, *Senior Lecturing Fellow*
 John Hope Franklin, *Professor of History and Professor of Law (Emeritus)*
 Robert B. Glenn, Jr., *Senior Lecturing Fellow*
 George D. Gopen, *Senior Lecturing Fellow*
 Robert M. Hart, *Senior Lecturing Fellow*
 Kenneth J. Hirsh, *Senior Lecturing Fellow*
 Sandra L. Johnson, *Senior Lecturing Fellow*
 Edward E. Kaufman, *Senior Lecturing Fellow*
 Jennifer D'A. Maher, *Senior Lecturing Fellow*
 Thomas K. Maher, *Senior Lecturing Fellow*
 Richard C. Maxwell, *Harry R. Chadwick, Sr., Professor of Law (Emeritus)*
 Carolyn McAllaster, *Senior Lecturing Fellow*
 Agnes Mirandes, *Lecturing Fellow*
 Michael Newcity, *Lecturing Fellow*
 Theresa A. Newman, *Lecturing Fellow*
 Paul V. Niemeyer, *Senior Lecturing Fellow*
 Allison J. Rice, *Senior Lecturing Fellow*
 H. B. Robertson, Jr., *Professor of Law (Emeritus)*
 David S. Rudolf, *Senior Lecturing Fellow*
 Mary M. Schroeder, *Senior Lecturing Fellow*
 Anthony J. Sirica, *Senior Lecturing Fellow*
 Nancy Russell Shaw, *Senior Lecturing Fellow*
 Melvin G. Shimm, *Professor of Law (Emeritus)*
 Kenneth D. Sibley, *Senior Lecturing Fellow*
 Allen G. Siegel, *Senior Lecturing Fellow*
 Scott L. Silliman, *Senior Lecturing Fellow*
 Janet Sinder, *Senior Lecturing Fellow*
 Terri A. Southwick, *Senior Lecturing Fellow*
 E. Carol Spruill, *Senior Lecturing Fellow*
 Deanell R. Tacha, *Senior Lecturing Fellow*
 Takehiko Takatsu, *Lecturing Fellow*
 Katherine Topulos, *Senior Lecturing Fellow*
 Stephen Wallenstein, *Senior Lecturing Fellow*
 Jane R. Wettach, *Senior Lecturing Fellow*
 Peter Wilson, *Lecturing Fellow*
 Way-Wen Yang, *Lecturing Fellow*

Admissions



The Law School strives to treat each applicant fairly and with candor. The following description of the admissions process at Duke is presented with that objective in mind.

Admissions Standards

At Duke, as at many law schools, the three most important admissions criteria are the Law School Admission Test (LSAT) score, the undergraduate grade point average (GPA), and the undergraduate institution attended.

Although reliance on purely academic criteria is appropriate in making some decisions, particularly those involving candidates either clearly admissible or clearly inadmissible, the majority of applications fall between these extremes. For these applications, Duke will give careful consideration to more subjective factors such as proven capacity for leadership, dedication to community service, excellence in a particular field, motivation, graduate study in another discipline, work experience, extracurricular activities, and personal and character information provided in letters of recommendation. Also, in interpreting the applicant's GPA, it is often necessary to make judgments regarding the strength of the course of study pursued and the significance of class rank or the progression of grades.

Although no quotas of any kind are employed in the admissions process, the Law School does make a conscious effort to achieve a broad diversity in each entering class in terms of general background, geography, and undergraduate institutions represented. An individual student may be selected not only for his or her marked potential for academic success, but also because application materials indicate that he or she can bring to Duke unique personal qualities or talents that will enhance the overall character of the entering class.

Duke has a faculty-initiated affirmative action plan for minority admissions, and special care is taken in evaluating applications from members of minority groups who traditionally have not been well represented in the legal profession. On occasion, special consideration may be given to North Carolina residents and children of Law School alumni who are qualified to complete the required course of study.

An applicant who has graduated from an accredited college, or one who will have been graduated from an accredited college during his or her course of study at the Law School, may be admitted as a candidate for the degree of Juris Doctor (J.D.).

Admission Procedures: J.D. Program

The Admissions Committee receives its authority by delegation from the law faculty and reports to the law faculty. The committee, composed of four law professors, two administrative deans or directors, and three law students, decides policy questions arising in the admissions process. Student members of the committee, however, do not review individual files. All individual applications are reviewed by the assistant dean of admissions. Each applicant is responsible for collecting and submitting the following documents:

1. Completed application form obtained from Admissions Office, Duke University School of Law, Box 90393, Durham, North Carolina 27708-0393. Telephone (919) 613-7200. Internet: admissions@law.duke.edu.
2. Three completed reference forms, one of which should be written by an appropriate academic dean at the undergraduate school last attended. It is suggested that the other reference forms be written by professors who have personal knowledge of the academic performance and potential of the applicant. References compiled and submitted by an established Career Planning and Placement Office at the applicant's undergraduate school will be accepted. Although academic references are preferred, applicants who have been out of school for some time may substitute letters from employers or others who are well acquainted with their personal traits and intellectual potential.
3. A nonrefundable processing fee of \$65. This application fee is not waivable except in cases of documented extreme personal hardship.
4. Scholarship assistance form. All applicants are required to return this form; those not wishing to be considered for scholarships may so indicate on the form.

Applicants are strongly urged to take the Law School Admission Test (LSAT) no later than December. Registration forms and information should be procured by writing directly to Law Services, Box 2000, Newtown, Pennsylvania 18940. Applicants with disabilities should contact Law Services directly for information concerning special accommodations for taking the LSAT. Only in exceptional cases will Duke waive the LSAT requirement.

Applicants must arrange for the submission of transcripts from all undergraduate and graduate schools attended to the Law School Data Assembly Service (LSDAS), Box 2000, Newtown, Pennsylvania 18940.

Duke has no formal deadline for the submission of applications. However, applicants to the first year class may disadvantage themselves by submitting their applications later than February 1. Review of completed applications begins in December and continues until the class is filled.

Duke has an early action option which allows students whose applications are complete by November 1 to receive a decision (admit, deny, or hold) by December 15. Early action applications are evaluated in the same way and by the same standard as in the regular admissions cycle.

Applicants who visit the Law School are encouraged to talk with currently enrolled students, and may attend a class and meet with an admissions representative if the visit is scheduled in advance.

Each applicant extended an offer of admission will be given a reasonable amount of time to respond. Written offers of admission will be sent to admitted candidates specifying the amount of deposit and other conditions required to hold a place in the class. A waiting list is established in late spring and held open until the registration date. Offers are extended to applicants on the waiting list as withdrawals occur during the summer.

Admission to the Law School is conditional upon receipt of a final official transcript of all undergraduate and graduate work undertaken by the candidate.

Admission Procedures: Summer Joint Degree Programs

Procedures for admission to the summer joint degree programs are no different from those established for the regular J.D. program commencing in the fall semester. Applicants should indicate on the application form that they are applying to the summer program and designate either the LL.M. program offered by the Law School, or the Graduate School department in which they wish to pursue the A.M. or M.S. Applicants to the LL.M. program are selected by the Law School Admissions Committee. The selection process for A.M. and M.S. applicants is bifurcated. Upon a favorable decision by the Law School Admissions Committee, the applicant's file will be forwarded to the appropriate Graduate School department for review. Applicants must be formally admitted to the master's program by the Graduate School.

Students must elect whether they wish to be considered for entrance in the summer or fall, and may not be considered concurrently for admission to both programs. A student wishing to change that election may do so prior to receipt of a final admission decision without payment of an additional processing fee. However, the Admissions Committee will treat the application to the alternate program as newly completed; thus a late change in election may prejudice the applicant's chance for admission. An offer of admission to one program is not transferrable to another program. This policy reflects our need for a firm commitment from applicants regarding which program they wish to enter so that we may deal fairly with all applicants competing for a limited number of spaces in each class. Although applicant pools may change from year to year, our experience has been that competition for spaces is equivalent for the two programs.

Other Joint Degree Programs

Applicants for any of the other joint degree programs offered by the Duke Law School are considered for admission to both schools on the same basis as those applicants who are applying for the individual programs. The admission decision of one school has no bearing on the admission decision of the other school. If accepted for admission by both schools, the applicant is automatically eligible to participate in the established joint degree program. Students planning to participate in such programs should notify the Law School immediately upon their admission.

Master of Legal Studies

Admission to this degree program is limited to persons who have achieved distinction in law-related professional work or who are pursuing law-related graduate degrees in other fields. Application to the program proceeds in exactly the same manner as for the J.D. program, with the single exception that the LSAT is not required of applicants who have taken the Graduate Record Examination in their primary field of study. Applicants who wish to substitute the GRE score should have an official report sent to the admissions office.

Reactivating Admissions Files

If an applicant has applied for admission in a previous year and was not extended an offer of admission or chose not to enter during that academic year, he or she may request that the file be reactivated for consideration by the Admissions Committee. The applicant should update his or her personal statement at that time. A nonrefundable fee of \$65 is charged for processing the application, and a check or money order for this amount must accompany the request for reactivation of the file. The applicant will not be required to re-register with the Law School Data Assembly Service (LSDAS) unless

he or she retakes the LSAT after initially applying to the Law School. An updated transcript will be required to document academic work completed but not reflected on the last LSDAS report received by Duke. Application files are retained for three years.

Transfer Policy

In order to be considered for admission to Duke, a transfer applicant must present evidence of the satisfactory completion of one year of study at any law school that is a member of the Association of American Law Schools, and be eligible for readmission to that school. To be given serious consideration for admission, an applicant should rank at least in the top third of the class. Two academic years of law study must be completed at Duke.

The following items are required to complete a transfer applicant's admission file:

1. A nonrefundable processing fee of \$65;
2. Letter of certification from the dean of the law school attended;
3. References from two law professors who have personal knowledge of the academic performance and potential of the applicant;
4. Certified transcript of all grades earned in the first year of law school;
5. A copy of undergraduate transcript and LSDAS report.

Spring semester grades must be received before decisions can be made. The deadline for submitting transfer applications is July 1. Decisions are normally made the last week of July.

Graduate Study in Law

Admission to Duke to pursue law study beyond the basic professional degree is generally limited to J.D./LL.M. candidates and international students. For information about application to the graduate study program, see the description of admission procedures for the summer joint degree program or the section on international students.

University and Law School Rules

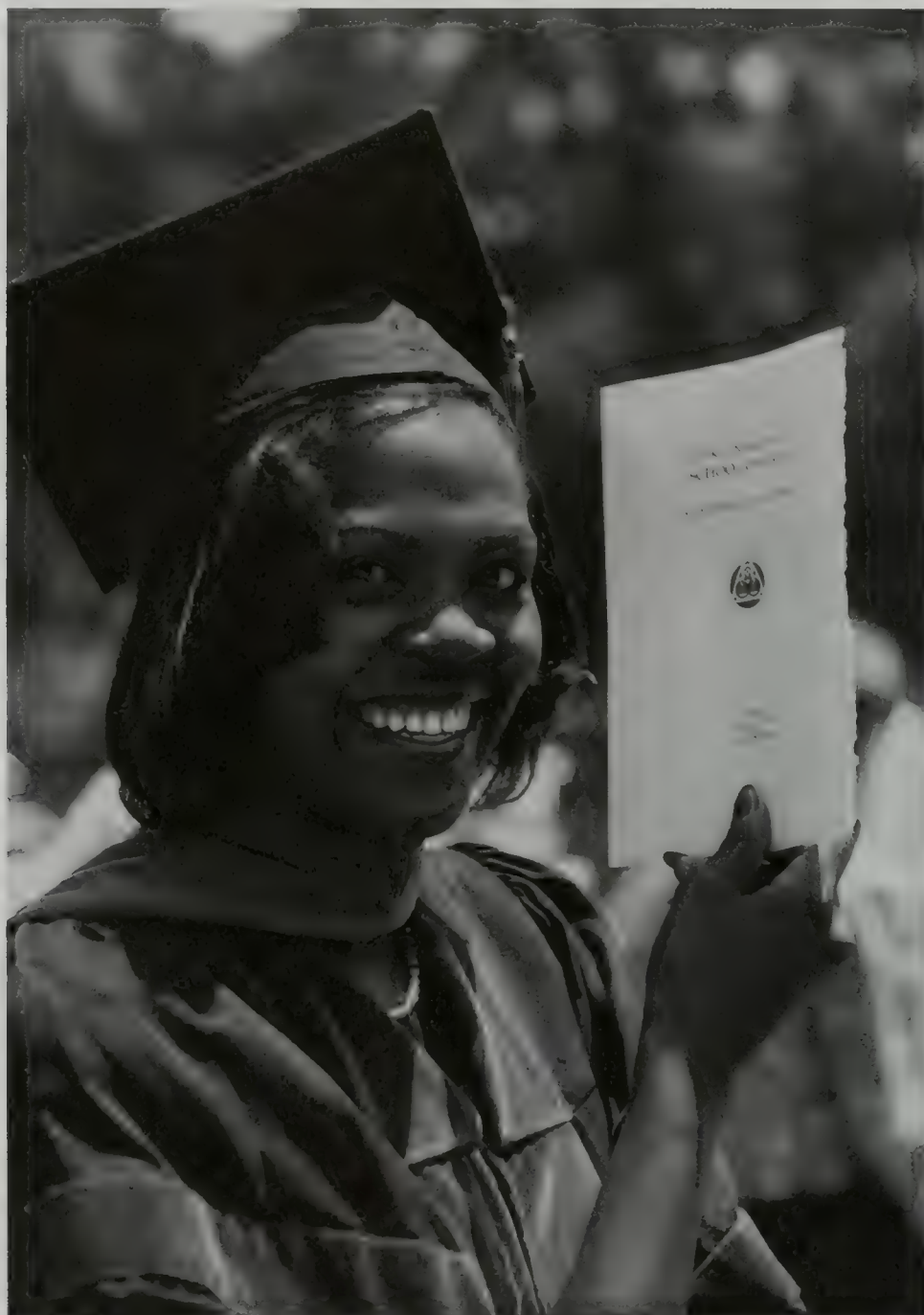
Students are subject to the rules and regulations of the university and the Law School that are currently in effect, or those that in the future may be promulgated by the appropriate authorities of the university. A copy of the Law School Rules is available for review in the Law School Library and on the Law School's World Wide Web site: <http://www.law.duke.edu>. Every student, in accepting admission, indicates a willingness to subscribe to and be governed by these rules and regulations. The student also acknowledges the right of the university to take such disciplinary action, including suspension and/or expulsion, as may be appropriate, for failure to abide by these rules and regulations of academic misconduct, or for other conduct adjudged unsatisfactory or detrimental to the university.

Duke University is a drug-free work place as defined by federal regulations.

[Information about admission to the Duke University School of Law is also available at the Law School's World Wide Web site: <http://www.law.duke.edu>.]



Financial Information



The cost of providing a legal education of the quality offered by Duke is high and has been steadily increasing. An annual report of the Law School explains in moderate detail what those costs are, and how they are met; a copy is available on request. As the report reveals, the Law School is substantially subvented by the university from its endowment sources. In addition, the Law School has some resources of its own, including generous annual giving support from its alumni. Nevertheless, the bulk of the cost of the program must be borne by the students who receive it.

Tuition

J.D., LL.B., and M.L.S. Candidates. For the academic year 1997-98, entering students in the J.D. program, transfer students, and candidates for the M.L.S. degree will pay a full year's tuition of \$23,350. Students pursuing the J.D./A.M. or the J.D./LL.M. in the summer entering program will pay an additional \$7,750 in tuition for the summer term. Entering students must pay their fall tuition by August 1, 1997. The tuition refund policy is set forth below.

Subsequent years of study toward the J.D. program will be billed at the current tuition rate. In recent years, that rate has been significantly increased each year. Students in joint degree programs will be billed tuition at rates appropriate to their particular programs.

Graduate Degree Candidates. Students pursuing the LL.M. degree will pay tuition of \$23,350 in 1997-98 for their single year of instruction. S.J.D. candidates must enroll for two years; tuition for the S.J.D. program for 1997-98 is set at \$23,350.

Other Fees

Late Registration Fee. Students who register in any semester at a date later than that prescribed are required to pay a \$25 penalty.

Student Health Fee. A mandatory student health fee of \$416 (\$208 per semester) is charged to all Duke University students. Hospital insurance is available. Cost for the academic year 1997-98 is \$667 for a single student, \$2,110 for family coverage. The hospital insurance policy coverage is for one year.

Absentia Fee. Duke Law School students spending one semester or all of their final year of law school at another law school shall be charged an in absentia fee for the semester or semesters "visiting" at another law school. The fee is the greater of (1) ten

percent of Duke Law School tuition or (2) the amount that Duke Law School tuition exceeds the tuition at the "visited" school. The fee shall not exceed two-thirds of Duke Law School tuition. Students visiting at Duke will receive no scholarship assistance from Duke Law School.

Athletic Events Fee. Law students may secure admission to all regularly scheduled University athletic contests, with the exception of soccer and basketball, held on University grounds during the entire academic year free of charge. The fee for basketball and soccer is payable in the fall semester. Students may also use the facilities of the Duke golf course upon payment of student green fees.

Duke Bar Association Fee. A \$30 fee each semester is due and payable not later than the day of registration for a particular semester. This fee is utilized exclusively to support the activities of the student bar association.

Parking Fee. Students wishing to drive to the campus must register a car for the university's parking lots at an annual fee of \$75-\$175, depending on availability of spaces in various open or gated lots.

Academic Transcript Fee. The university will charge a one-time academic transcript fee of \$30.

General Expenses

Applicants should be aware that the following general expense estimate was compiled in the spring of 1997, and for future years appropriate revisions may be necessary to reflect inflationary increases. The best estimate of total living costs for a nine-month academic year excluding tuition and fees is approximately \$11,610 for a single student. Included in the above cost-of-living estimate are current expense levels for lodging, board, books (approximately \$1,050 if purchased new), supplies, transportation, and personal effects. First-year students are also required to own a computer, which can cost up to \$4,000 for a notebook computer. Financial aid awards in most cases cannot be based on proposed budgets in excess of these figures.

University Policies for Payment of Accounts

Payment of Accounts for Fall and Spring. The Office of the Bursar issues invoices for tuition, fees, and other charges approximately four to six weeks prior to the beginning of classes each semester. The total amount due on the invoice is payable by the invoice due date which is normally one or two weeks prior to the beginning of classes. If full payment is not received by the due date, a late payment charge as described below will be assessed on the next invoice and certain restrictions as stated below will be applied. Failure to receive an invoice does not warrant exemption from the payment of tuition and fees nor from the penalties and restrictions. Entering first year students are required to pay tuition, fees, and other charges by August 1, 1997. Students not receiving a bursar invoice should telephone the bursar's office at (919) 684-3531 to request an invoice.

Penalty Charge. If the total amount due on an invoice is not received by the invoice due date, a penalty charge will be assessed from the billing date to the due date of that invoice. The penalty will be assessed on the subsequent invoice at an annual rate of 16 percent applied to the past due balance on that invoice. The past due balance is defined as the previous balance less any credits received and any payments received on or before the due date. Students receiving loans and/or scholarships should submit in writing by the late payment date on the invoice to the bursar's office each semester the name and amount of each loan that will satisfy the bursar's invoice to avoid penalty charges. Penalty charges will be assessed students who do not provide loan information to the bursar's office each semester—no exceptions. Mail payments to: Bursar, P.O. Box 651032, Charlotte, NC 28265-1032.



Restrictions. An individual will be in default if the total amount due on the student invoice is not paid in full by the due date. An individual who is in default will not be allowed to register for classes, receive a copy of the academic transcript, have academic credits certified, be granted a leave of absence, or receive a diploma at graduation. An individual in default will be withdrawn.

Tuition Refunds. Tuition refunds are governed by the following policy. It should be noted that special rules apply to students receiving Title IV loan assistance, which may be obtained from the financial aid office.

1. In the event of death or a call to active duty in the armed services, a full tuition refund is granted.
2. If a first-year student withdraws after the tuition due date for the summer or fall term, up to 50 percent of tuition may be nonrefundable, if the Law School is unable to enroll another qualified applicant because of the student's late withdrawal. First-year students who withdraw after the beginning of classes for the summer or fall term are ineligible for any tuition refund.
3. In all other cases of withdrawal, students or their parents may elect to have tuition charges refunded or carried forward as a credit for later study according to the following schedule:
 - a. withdrawal before the beginning of classes-full refund;
 - b. withdrawal during the first or second week-80 percent;
 - c. withdrawal during the third through fifth week-60 percent;
 - d. withdrawal during the sixth week-20 percent
 - e. withdrawal after the sixth week-no refund; but
 - f. tuition charges paid from grants or loans will be restored to those funds and will not be refunded or carried forward.

Scholarship Assistance

The Law School offers both merit-based and need-based scholarships to incoming students.

Scholarship awards are generally made in the form of a contract committing the school to a total grant to be disbursed over the student's first five semesters of Law School. This schedule makes more money available early, when it is most needed, since summer savings and permanent job prospects lessen the financial burdens of most students in the third year.

Students seeking scholarship assistance should file a scholarship application at the same time they apply for admission. Scholarship applications are mailed with the admission application. Most scholarship awards are made just following the admission decision, so that applicants may receive the earliest possible notice of the extent of scholarship support available. The fact that a student has applied for financial aid will not affect the decision on the application for admission.

Need Awards. The Law School provides a number of scholarships that are intended primarily to aid those students who are most in need of financial assistance. To ensure that full consideration of financial need is possible at the time when most of our scholarship funds are awarded, such students are required to provide accurate information regarding family (student and both parents) income and other relevant circumstances on the Duke scholarship application. Inclusion of information from both parents on the Duke scholarship form is mandatory.

Merit Awards. The Law School competes for students with the top institutions in this country. To attract a solid core of outstanding class members, merit scholarships are also offered. Merit, for this purpose, is usually defined as extraordinary academic promise manifested by grades and test scores which are substantially above the class

medians. It is not to be supposed that persons receiving such awards are more meritorious, in the broadest sense of that word, than many other entering students whose admissions credentials may seem a bit less unusual. But, it is believed, all students at the school are benefited by the solid assurance that Duke law students as a group are among the most able anywhere.

Note: Students who can demonstrate both financial need and merit should apply for a need-based scholarship, not a merit award. Typically, those who are both needy and meritorious receive slightly higher scholarship amounts than do those who apply for the funds based solely on merit.

Specially Funded Scholarships. Many of the Law School's scholarships are funded from general endowment and other Law School revenues. Some scholarship candidates are selected each year for support from one of several specially endowed scholarship funds. The criteria for these named awards vary; all students applying for aid will be considered for any special scholarships for which they may be eligible.

The *Marjorie Patrick Arnold Scholarship* was established in 1983 by Hubert K. Arnold '39 (now deceased) in honor of his wife.

James A. Bell Scholarships were established by the Bell family in honor of a federal judge.

Neill James Blue Memorial Scholarships were established in memory of a law student who suffered a tragic death in 1971.

The *J. Paul Coie Fellowship* was first offered in 1991 to support a student who studies law and jurisprudence; it is awarded to a candidate pursuing a JD/AM.

The *Serena Crawford-Gregory Robertson Fund* was created in 1991 by the parents of two Duke Law alumni who were tragically killed in an automobile accident.

The *DeHoff/Arnold Endowed Law Scholarship* was established by Hubert K. Arnold '39 (now deceased) in memory of his parents.

Dunspaugh-Dalton Foundation Scholarships were established by a Miami foundation.

Jenny Ferrara Scholarships were established by Vincent L. Sgrosso of the Class of 1962, in honor of his grandmother.

The *Giles-Rich-Stoner Scholarship* was established by Hubert K. Arnold '39 (now deceased) to honor his three sisters, Dorothy Arnold Giles, Naomi Arnold Rich, and Ruth Arnold Stoner.

The *H. Claude Horack Law Scholarship Fund* was established in 1991 by the children of a former Duke Law School dean and professor to commemorate his contribution and service to the Law School.

The *Hunton and Williams Scholarship* was established by the law firm of Hunton & Williams through its Raleigh, North Carolina office.

The *Jack M. Knight Memorial Fund* was established by a group of partners at the Charlotte, North Carolina law firm of Robinson, Bradshaw & Hinson, in honor of a 1971 law alumnus.

The *Arthur Larson Scholarship Endowment Fund* was established in memory of this preeminent scholar on worker's compensation and employment.

The *Livengood Endowment Fund* was established by Charles H. Livengood III to honor his mother and his father, who served as a Law School professor and, subsequently, as university marshal.

The *William B. and Grace R. McGuire Scholarship* was established by William B. McGuire, of the class of 1933, and his wife, Grace.

The *Miller and Chevalier Charitable Foundation Scholarship* was established by the Washington, DC law firm of Miller and Chevalier.

The *Robert Netherland Miller Scholarship* was established by a Duke law alumnus in honor of a founding partner of the Washington, DC law firm of Miller and Chevalier.

The *Samuel Fox Mordecai Scholarship* honors the first dean of the Duke Law School, who served from 1905-1927.

Richard M. Nixon Scholarships were established by the Class of 1937 to honor their classmate, the former President of the United States.

John R. Parkinson Scholarships were established by the Parkinson family.

The *A. Kenneth Pye Law Scholarship Fund* honors this man who so effectively served Duke University in various capacities as professor, university counsel, dean of the Law School, and chancellor of the university.

South Carolina Law Alumni Scholarships were established by South Carolina alumni.

Anna Peirce Stafford Scholarships were established in honor of members of the family.

The *Warren A. Thornhill Scholarship* was established by Warren A. Thornhill III '52.

The *Robert William and Robert Wheaton Walter Scholarships* were established by Robert William Walter of the Class of 1981, in honor of his father, Robert Wheaton Walter of the Class of 1948.

The *Paul B. Williams Law School Fund* is a scholarship funded through the generosity of Paul B. Williams, Inc.

Bunyon S. Wimple Scholarships were established by the Womble family in honor of the founder of a North Carolina law firm.

Upperclass Awards. Virtually all available scholarship funds are allocated to entering students and to students continuing under a scholarship contract awarded at the time of admission. No additional scholarship funding is available to upperclass students, except for the *Estate Planning Conference Scholarship*, which was endowed by the Estate Planning Council of Duke University and is awarded to a third-year law student with a particular interest in estate planning and the *David H. Siegel Scholarships* established by Allen G. Siegel of the Class of 1960, in memory of his father.

Title IV Loan Assistance

Title IV loan assistance is available to qualified students. Students who wish to apply for this assistance must complete the Free Application for Federal Student Aid. To request the Free Application for Federal Student Aid, telephone 1-800-433-3243. Be certain that your request specifies the correct academic year. To obtain more information on federal student financial aid, write to Federal Student Aid Information Center, P.O. Box 84, Washington, DC 20044 to request the booklet "The Student Guide: Financial Aid from the U.S. Department of Education—Grants, Loans, and Work-Study." This booklet is free.

Complete the Free Application for Federal Student Aid. Mail the completed form in the return envelope attached to the Free Application for Federal Student Aid. The U.S. Department of Education will process the Free Application for Federal Student Aid and mail the SAR directly to the student applicant. The student application should verify the information on the SAR. If the information on the SAR is correct, complete, sign, and mail the SAR to the Office of Financial Aid, Duke University School of Law, Box 90363, Durham, NC 27708-0363. If corrections to the SAR are required, follow the instructions on the SAR.

Satisfactory Status Policy

To remain eligible for Title IV funding, a student must maintain a 2.1 cumulative grade point average to remain in good standing at the Law School. A student placed on probation will be allowed one semester to improve his or her grade point average to a 2.1.

Non-Need Based Loan Assistance

The Law School also has other loan programs available to students who need additional loan funds to meet the approved academic period budget. A good credit history (report) is mandatory to receive these loans. To check your credit history contact your credit bureau. For more information about credit bureaus or resolving credit problems, write to: Public Reference, Federal Trade Commission, Washington, DC 20508 .

Federal Work Study

The Law School also receives a limited amount of federal work-study funds each year. The school does not recommend that first-year students work, so these funds are reserved for second- and third-year students who are working in the Law School.

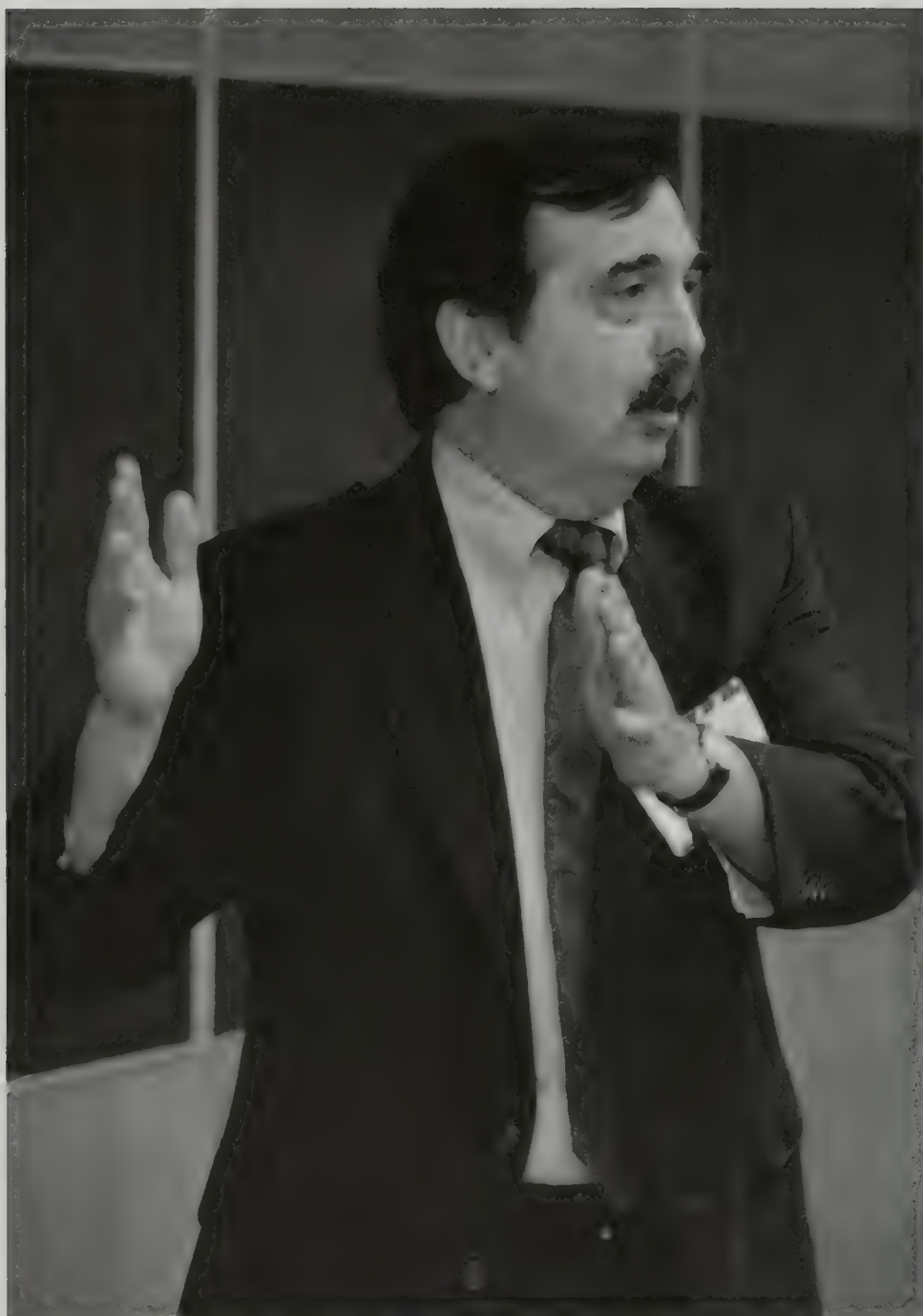
Loan Forgiveness Program

Since 1988, Duke Law School has had a loan forgiveness program which assists graduates who accept low-paying public interest or government employment to repay their law school loans. Funds disbursed through this program take the form of a grant. More information about the very generous terms of this program is available from the Office of Admissions and Financial Aid or through the Law School's World Wide Web site: <http://www.law.duke.edu>.

Visiting Students

All financial assistance for visiting students at Duke Law School must be processed through the institution from which the student will receive his or her degree.

Scholastic Standards



Grading

Most courses are generally available only on a graded basis. Independent research, ad hoc seminars and occasionally some other courses may be designated for credit/fail grading by action of the faculty. If a student has previously taken or audited a course for at least an eight-week period, or in other special circumstances, credit/fail grading may be required or authorized in an individual case at the discretion of the instructor and the dean. Grades received in courses taken in other divisions of the university or courses transferred from other law schools are made part of the student's permanent record, but are not included in the Law School grade point average unless the student receives a failing grade.

The Law School uses a slightly modified form of the familiar 4.0 grading system. No official labels, such as specific Honors, High Pass, or A, B, C, etc., are attached to specific points or ranges of grades within our system. As at a number of other major law schools, exceptional performance may be indicated by a grade of 4.1 to 4.5, and grades above 4.0 are roughly the equivalent of an A+ in other systems. Grades below 1.6 are failing.

Classes of forty students or more have a mandatory median grade of 3.1. The standard grade distribution curve is as follows:

<i>Interval</i>	<i>Percentage of Class</i>
4.1-4.5	0-5%
3.6-4.0	0-20%
3.1-3.5	30-40%
2.6-3.0	30-40%
2.1-2.5	0-15%
1.6-2.0	0-10%
1.1-1.5(failing)	0-5%

Good Standing

Any student who is eligible to continue the study of law who is not on probation shall be in good standing. Those considered ineligible to continue the study of law include (1) any first-year student who has attained a grade-point average of less than 1.9 or who has received failure grades in courses totaling more than eight semester-hours; (2) any student who has received failure grades in courses totaling more than ten semester-hours during the second and third years or whose grade-point average for the second year is less than 2.0; or (3) any student who has been placed on probation and who has failed to comply with the conditions of probation or who at the end of the specified probationary period has not attained or maintained a grade-point

average of at least 2.1. Under certain circumstances a student otherwise ineligible to continue the study of law as a result of academic performance in the first year will be permitted to repeat the first year.

A student will be placed on probation if (1) in the first year, the student has attained a grade-point average of less than 2.3 but not less than 2.0 and who has received failure grades in courses totaling not more than eight semester-hours; (2) the student has repeated the first year and attained a grade-point average of not less than 2.1 but less than 2.3 or who has attained a grade-point average of at least 2.3 but who has received a failure grade in any course; (3) in the second year, the student has attained a grade-point average of less than 2.3 in either semester of that year or who has received failure grades in courses totaling not less than six but not more than ten semester-hours during that year; or (4) in the third year, the student has attained a grade-point average of less than 2.3 in the fifth semester.

Maximum and Minimum Course Loads

No first-year student may take courses other than those of the required first-year program, except joint degree students under the terms of their joint degree programs, or with the permission of the dean. No student other than a first-year student may take for credit courses totaling more than sixteen hours per semester, except with the permission of the dean.

No student shall take for credit courses totaling less than twelve hours per semester, except with the permission of the dean, and in no event may the student take less than ten hours per semester.

Attendance and Preparation

Students must regularly attend and prepare for all classes. A student who is excessively absent or grossly unprepared may, in the discretion of the instructor, be denied the right to take a final examination or to submit other required coursework.

Auditing Courses

Students may audit courses with the written permission of the instructor, but may not audit courses which, in combination with courses taken for academic credit, exceed seventeen hours per semester. The fact that a student has audited a course shall be indicated in the official records of the Law School.

Examinations

Final examinations are given in most courses at the Law School, and students should expect a final examination unless otherwise announced by the instructor. Students must take final examinations at the regularly scheduled time, unless permission is given by the dean's office. Permission is not granted normally except in extraordinary circumstances such as serious illness, exam scheduling conflicts, or the scheduling of three or more exams within a thirty-six hour period.

Submission Of Papers

Papers or other required coursework must be submitted no later than the last day of the regularly scheduled examination period of the semester in which the course is offered, unless the instructor sets an earlier deadline. In exceptional individual cases, the instructor may grant an extension, but the extension may not ordinarily be later than the twenty-eighth day following the last day of the examination period. After that date, an incomplete is entered. When an incomplete is entered, the required coursework must be completed by a date set by the instructor or, in the event of a rescheduled examination, by the dean. In no event may the deadlines be later than the last day of

the regularly scheduled examination period for the following semester.

Independent Study

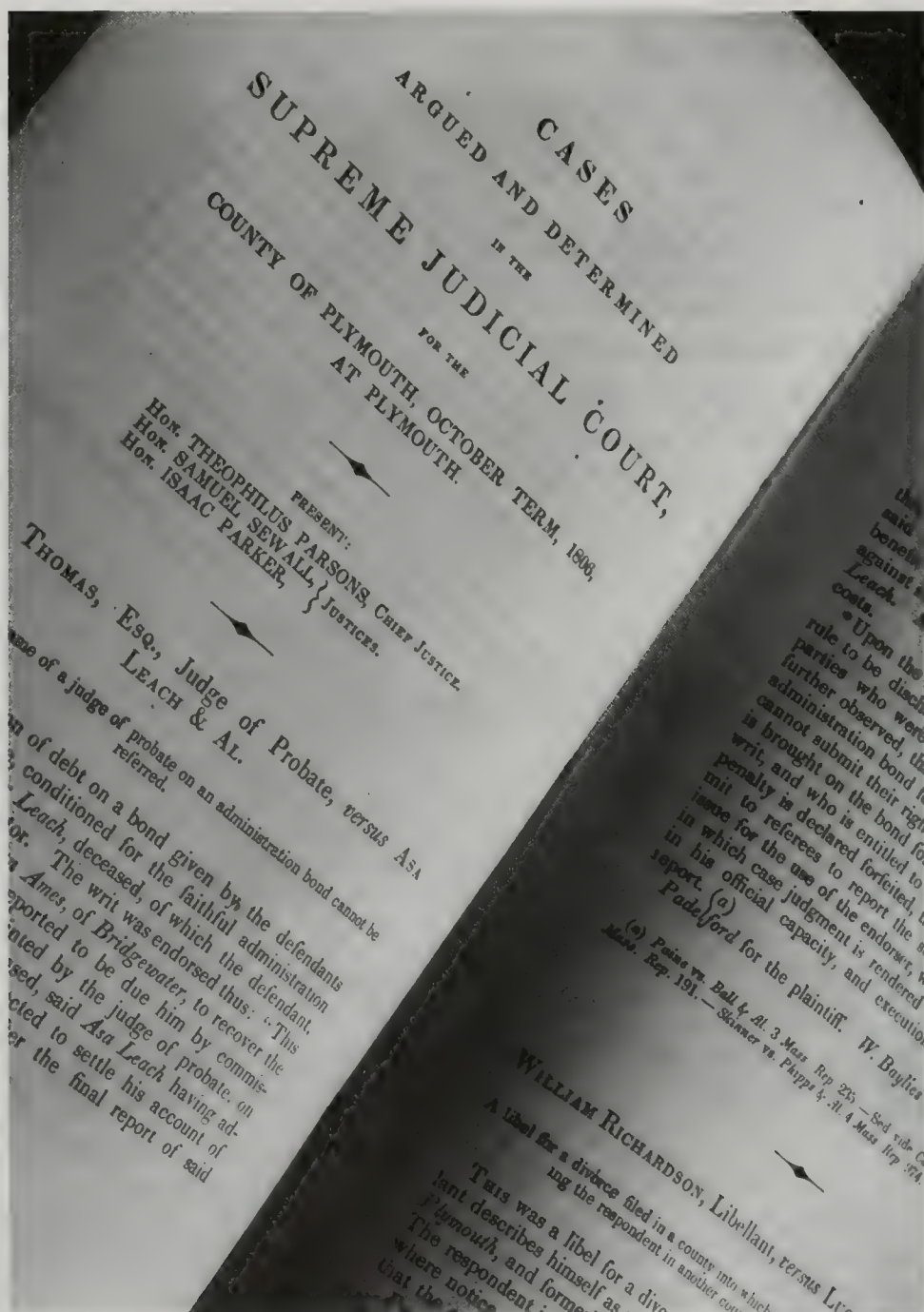
Independent study projects are arranged on an ad hoc basis by the student with an appropriate member of the faculty, and require the submission of a research paper of the kind generally submitted in seminars. A student may not take for credit more than four semester-hours of independent research in any academic year. Credit is awarded on a pass/fail basis.

Occasionally faculty members will agree to supervise a group of five or more students in an ad hoc seminar. Credit obtained from enrollment in ad hoc seminars is included in the four-hour limit for independent study credit per semester, and is awarded on a pass/fail basis.

Other Standards and Rules

Like all academic institutions, the Law School is governed by scholastic standards and rules promulgated by the faculty, which cover such matters as academic misconduct, eligibility to continue the study of law, academic probation, minimum and maximum course loads, examinations, and registration procedures. A complete copy of these rules is available for review in the Law School library and on the Law School's World Wide Web site at <http://www.law.duke.edu>.

Curriculum



Course Offerings

FIRST-YEAR CURRICULUM

110. Civil Procedure. A consideration of the basic problems of civil procedure designed to acquaint students with the fundamental stages and concerns of litigation—for example, jurisdiction, pleading, discovery, trial, choice of law, and multiparty actions. In addition, this course will highlight a number of specialized topics including the role of juries in deciding civil disputes, the ethical responsibilities of the litigation attorney, and the development of alternative dispute resolution systems. At several points, this course will focus on an analysis of the procedural system's operations as revealed through empirical studies. 4.5 units. *Carrington, Jones, Metzloff, or Rowe*

120. Constitutional Law. An examination of the distribution of and limitations upon governmental authority under the Constitution of the United States. Included are study of the doctrine of judicial review of legislative and executive action, the powers of Congress and the president, the limitations on state governmental powers resulting from the existence or exercise of congressional power, and judicial protection against the exercise of governmental power in violation of rights, liberties, privileges, or immunities conferred by the Constitution. 4.5 units. *Dellinger or Powell*

130. Contracts. The formation and legal operations of contracts, their assignment, their significance to third parties, and their relationship to restitution and commercial law developments; the variety, scope, and limitations on remedies; and the policies, jurisprudence, and historical development of promissory liability. 4.5 units. *Chua, Haagen, or Weistart*

140. Criminal Law. An introductory study of the law of crimes and the administration of criminal justice, including analysis of the criminal act and the mental element in crime, consideration of specific offenses as defined by statute and the common law, and discussion of typical defenses in relation to specific crimes. One of the purposes of this course is to introduce the students to the nature of social control mechanisms and the role of law in a civilized society. 4.5 units. *J. Coleman, Everett, or Miller*

150. Lawyers and Clients. In recent years this course has been offered during the first week of January. The faculty is now considering changes in the first-year and upper-class course offerings in ethics and professionalism. Information about any changes will be made available to students in the fall of 1997. 1 unit. *Staff*

160. Legal Research and Writing. Following instruction in legal research, students write three or five papers (from client letters to formal appellate briefs) under tutorial supervision of a faculty member; at least one brief is argued orally. Year-long course—total 3 units; per semester 1.5 units. *Bendlin, Dimond, Domonoske, Rice, or Wettach*

170. Property. A study of the basic concepts of real property law and conveyancing, including historical background; estates in land, including the fee simple, the fee tail with its statutory substitutes, the life estate, the estate for years, and other nonfreeholds; concurrent ownership; types of future interests; conveyances before and after the Statute of Uses; landlord and tenant; the modern deed-kinds, delivery, description, title covenants, and agreements running with the land at law and in equity; easements; and recording and title registration. 4.5 units. *Underkuffler or Wiener*

180. Torts. An analysis of liability for personal injuries and injuries to property. The law of negligence occupies a central place in the course content, but this course also considers other aspects of tort liability such as strict liability, liability of producers and sellers of products, nuisance, liability for defamation and invasion of privacy, and commercial torts. The subjects of causation, damages, insurance (including automobile no-fault compensation systems), and workmen's compensation are also included. 4.5 units. *Christie, D. L. Coleman, or Stone*

Upper-Class Curriculum

In the absence of special authorization from the dean, each student is required to take in each semester courses aggregating not less than twelve and not more than sixteen semester hours in order to be considered a full-time student for purposes of meeting the residency requirement for the J.D. degree.

The program in the second and third years is entirely elective. In planning his or her program, however, the student should bear in mind that certain more basic courses may be prerequisites to other more advanced courses, and that for this reason—as well as to avoid possible schedule conflicts—it is generally advisable to take these more basic courses in the second year.

Those offerings listed as courses are open to large enrollments. Those listed as clinical have limited enrollment in order to permit close supervision of the professional work students perform. Those listed as seminars are also limited in size and engage the students in research projects with the instructor. C-L: denotes a course offered in another part of Duke University that is cross-listed and may be taken for Law School credit.

MASTER OF LAWS COURSES

190. Distinctive Aspects of United States Law. This course will introduce international students to several of the distinctive aspects of U.S. law in the context of international business disputes litigated in U.S. courts. The focus of the course will be on civil litigation including the dual federal and state court system, the discovery process under the Federal Rules of Civil Procedure, the use of expert witnesses by parties, class actions, the civil jury, and punitive damages. 1 unit. *D. L. Coleman*

195. Legal Research and Writing for International Students. A research and writing tutorial designed to introduce international students to the techniques of case and statutory analysis as well as the tools and methods of legal research. Students are expected to complete written assignments and memoranda of law. 2 units. *J. Maher*

BASIC COURSES

Courses under this subheading that are listed as taught by *Staff* are unlikely to be offered during the 1997-98 academic year.

200. Administrative Law. A study of administrative agencies and legislative authority, information gathering and withholding, rule-making and order-formulating proceedings, judicial review of administrative actions, and constitutional limitations on administrative powers. 3 units. *Schroeder*

205. Antitrust. A study of the federal antitrust laws and the policy of using competition to control private economic behavior. 4 units. *Havighurst*

210. Business Associations. An examination of the state and federal law pertinent to corporations and, to a lesser extent, partnerships as business entities. Detailed attention is given to the legal ground rules for the life cycles of corporations—to their organization, preincorporation transactions, basic financial structure, internal governance arrangements, dissolution, and other fundamental changes. Further, a detailed study is made of those portions of the federal securities law that most closely affect the organic law of the corporation—federal regulation of the proxy system and

of tender offers and federal restraints on inside trading and on certain other transactions in securities. 4 units. *Cox or DeMott*

215. Commercial Transactions. A study of basic policy choices made in the structuring of the law governing commercial transactions. The course serves as an introduction to debt arrangements, payment systems, and used to allocate losses among commercial parties and to promote or disadvantage particular interests. An important objective of the course is developing student skills in dealing with a highly integrated statute. 4 units. *Staff*

218. Comparative Law: Western Legal Traditions. A comparative study of civil law and common law systems, focusing on legal institutions, legal actors, their roles and backgrounds. This course will examine dissimilarities as well as the shared Western legal and intellectual heritage and analyze selected problem areas. 3 units. *Bernstein*

220. Conflict of Laws. A study of the special problems that arise when the significant facts of a case are connected with more than one jurisdiction, including recognition and effect of foreign judgments, choice of law, federal courts and conflict of laws, and the United States Constitution and conflict of laws. 3 units. *Bernstein*

225. Criminal Procedure: Formal. A study of the basic rules of criminal procedure, beginning with the institution of formal proceedings. Subjects to be covered include prosecutorial discretion, the preliminary hearing, the grand jury, criminal discovery, guilty pleas and plea bargaining, jury selection, pretrial publicity, double jeopardy, the right to counsel, and professional ethics in criminal cases. 3 units. *Everett*

226. Criminal Procedure: Police. A study of the legal restrictions on police investigative practice which typically precede institution of formal proceedings, with special emphasis upon "stop and frisk," arrest, search and seizure, confession suppression, electronic surveillance, and operation of the exclusionary rule. 3 units. *Mosteller*

232. Employment Discrimination. A study of the law of employment discrimination, focusing mainly on federal law prohibiting race, sex, age, and handicapped discrimination. This course provides a basic knowledge of statutory coverage, standards, procedures and proof, and avenues of relief. Class discussion emphasizes important issues arising in current cases: for example, reverse discrimination versus affirmative action, the controversial "comparable worth" concept in equal pay litigation, and the "bottom line" defense to test invalidation. 3 units. *Jones*

235. Environmental Law. A basic examination of the rapidly growing body of law concerned with interrelationships between human activities and the larger environment. Rationales for environmental protection; risk assessment and priorities; roles of markets and governments; choice of legal approaches to risk management; roles of different branches and levels of government, and of nongovernmental actors; interplay of scientific, economic, social, and other factors in development and consequences of environmental law. Analysis of common law and statutory regimes for air, water, hazardous waste and toxics, resource use, and biodiversity and ecosystems. Focus on U.S. legal system with some illustrations from foreign, international, and global contexts. 3 units. *Schroeder*

240. European Union Law. An introduction to the constitutional and substantive law of the European Union, including: the origins and institutions of the European Union; the relationship of European Union law and national law; the enforcement of European Union law; and freedom of movement of goods, persons, and services; sex discrimination; foreign relations competence of the European Union. 3 units. *Bernstein*

245. Evidence. A study of the theory and rules governing presentation of evidence to a judicial tribunal, including the concept of relevancy; character evidence; judicial notice; real and demonstrative evidence; expert testimony; authentication of writings;

the best evidence rule; competency, impeachment and rehabilitation of witnesses; hearsay and the exceptions to its exclusion; and privileged communications. 3 units. *Mosteller*

250. Family Law. A study of legal and policy issues relating to the family, including marriage and divorce. Topics include requirements to marriage, unmarried cohabitation, marital contracts, equitable distribution at divorce, spousal support, child custody, and child support. In addition to a three-hour final examination, all students must negotiate a separation agreement. 3 units. *Bartlett*

255. Federal Income Taxation. An introduction to federal income taxation, with emphasis on the determination of income subject to taxation, deductions in computing taxable income, the proper time period for reporting income and deduction, and the proper taxpayer on which to impose the tax. 4 units. *Schmalbeck*

260. Financial Information. Many attorneys are required to evaluate financial data, notably financial statements from corporations, on a regular basis. The need is not limited to corporate attorneys; indeed litigators in securities, antitrust, malpractice, or general commercial litigation frequently must analyze financial information. Proper evaluation requires a familiarity with accounting principles and practices. This course serves to both introduce basic accounting principles and practices and their relationship to the law, as well as to study a number of contemporary accounting problems relating to financial disclosure and the accountant's professional responsibility. 3 units. *Wilson*

265. First Amendment. The basic constitutional law of the free speech-free press clause and the church-state clauses of the first amendment. 3 units. *Van Alstyne*

267. Insurance Law. An examination of the nature of insurance and the insurance contract. Possible topics include: the role of risk classification, marketing, the principle of indemnity and the notion of an insurable interest, subrogation, the risks transferred, rights at variance with policy provisions, claims processes, and justifications for and the nature of regulation of insurance institutions. 3 units. *Staff*

270. Intellectual Property. An introduction to the principal theories of intellectual property in the fine arts and in the entertainment and sports industries. Includes comprehensive instruction in copyright, unfair competition, moral rights, the law of ideas, and the right of publicity, as well as selective coverage of other related subjects. NOTE: This course is a prerequisite for Law 322, 369, 393, and 530. 4 units. *Lange*

275. International Law. An introduction to public international law, including: the nature and sources of international law; its place in national and international decision making, and its impact on U.S. law; the positions of international organizations, states, and persons in the international legal system; principles concerning state sovereignty, territory, and jurisdiction; foreign sovereign immunity and the act of state doctrine; the law of treaties; state responsibility; international dispute settlement; the use of force; the roles of the United Nations. Foundational course providing both a survey of the field and a platform for more specialized international courses. See the web for additional information. 4 units. *Catherine Adcock*

277. Introduction to International Development. Introduction to international development from normative viewpoint. Exploration of goals and methods used to advance them, including all views and perspectives on difficult normative issues. An overview of international and bilateral aid regimes, use of participatory and grassroots development versus centralized planning, application of appropriate technology, agricultural development, relationship between development and human rights. Examination of the possibility and desirability of transplanting legal institutions and law from developed nations and the issue of whether international assistance policy and practice can be brought to bear at home. 3 units. *Catherine Adcock*

280. Jurisprudence. A historical examination of the development of legal philosophy from ancient times to the contemporary period: from Aristotle's work on

justice and his concept of how political life should be organized in the ideal state to schools of natural law and areas in which natural law philosophy enters into contemporary legal thought. Development of modern legal positivism, as reflected in the work of John Austin, and to types of legal philosophy that have been derived from the legal positivism, such as legal realism and contemporary work exploring the basic analytical structure of the legal system. Gives students the historical and philosophical background to engage in discussions of contemporary jurisprudential issues. 3 units. *Staff*

285. Labor Relations. A study of the law of labor-management relations, centering upon the National Labor Relations Act, as amended. This course investigates problems involved in the regulation of industrial conflict (strikes, picketing, boycotts, and unfair labor practices by employers), the establishment of the collective bargaining relationship, the negotiation and enforcement of the collective agreement, the arbitration of disputes under the agreement, the relationship between the union and its members, and the protection of individual and minority rights. 3 units. *Culp*

287. Principles of Commercial and Bankruptcy Law. Introduction to principles and concepts of commercial law and bankruptcy and their interplay. Brief overview of innovative aspects of sales law, letters of credit, documents of title, negotiable instruments. Focus on secured transactions under Article 9 of the UCC, concepts of security interests, collateral, perfection and priority, foreclosure. Property of a bankrupt debtor's estate, automatic stay of foreclosure action, use of property subject to security interest, adequate protection of secured party's interest, fraudulent conveyances, rejection of executory contracts, bankruptcy trustees, avoiding powers, preferences, postpetition effect, set-offs, subordination. 4 units. *Schwarcz*

290. Remedies. An examination of the principles governing the use of judicial remedies, such as damages, injunctions, and declaratory judgments, in a variety of public and private law settings. The course will consider the goals of remedies doctrines and the relationship of the doctrines to other facets of the legal system. Topics will include recent developments in remedies law concerning such areas as school desegregation, consent decrees in civil rights suits, and punitive damages, which highlight the tensions underlying remedies principles. 3 units. *Staff*

295. Trusts and Estates. An examination of noncommercial property dispositions, both testamentary and inter vivos, including the following topics: intestate succession, wills and will substitutes; creation and characteristics of trusts; powers of appointment; problems in trust and estate administration. 3 units. *Reppy*

ADVANCED COURSES

Courses under this subheading that are listed as taught by Staff are unlikely to be offered during the 1997-98 academic year.

301. AIDS Law. The course will encompass substantive law issues raised by clients with HIV/AIDS. It will employ a multidisciplinary approach to teaching about the legal problems faced by persons with HIV and will involve collaboration with medical and marketing specialists, social workers, and clients. Topics include estate planning, AIDS pharmaceuticals, public benefits, health care issues, permanency planning for children and other family law issues, insurance and employee benefit issues, public health issues, housing and employment discrimination, torts and HIV-related private lawsuits, criminal law issues. 2 units. *McAllister*

303. American Legal History. Social history of American law from the founding of the Jamestown colony through the civil rights movement. Much legal debate is grounded in assumptions; course provides a perspective on that past, and the richness of American legal tradition. Focus on specific historical events and context as a way of understanding broad general themes. Topics include founding of European settlements in North America, relations between colonists and native peoples, witch trials, legal

proof, experiments with constitutionalism, limitation revolutionary principles, role of courts and judges, changing principles of tort and contract law, response to changes, criminal law and slavery, railroad regulation, industrial accidents, and civil rights movement. 3 units. *Haagen*

305. Banking Regulation. Examination of the regulation of domestically-owned banks and related depository institutions in the United States. Review of the development of modern banking regulation paying close attention to the major public policy issues of the day, from monetary policy to consumer protection and lending discrimination. Students introduced to the complex business of banking, the wide range of supervisory responsibilities of banking regulators, the delicate balance between federal and state interests. 2 units. *Cammarn*

308. Bankruptcy. A study of the rights of debtors under federal bankruptcy law and the corresponding rights of secured and unsecured creditors. Examination of the various types of bankruptcy proceedings that are available and requirements for filing under each, rules for determining rights of and payments to various kinds of claimants, powers available to the trustee to undo transfers of property, and rules determining which obligations are dischargeable by the debtor. 3 units. *Howard*

309. Children and the Law. Survey of laws concerning children, including responsibilities of state and family of the child; legal treatment of abused and neglected children; medical treatment of children; adoption; treatment of children accused of crimes; child labor laws. Focus on U.S. laws and policies, as well as international and comparative analysis. Comparison of the role of government in the care of children in the U.S. and other nations' courts to determine eligibility for adoption and treatment of children accused of crimes. The course will address the International Convention on the Rights of the Child. 3 units. *D. L. Coleman*

310. Collective Bargaining. A comprehensive treatment of the legal and practical aspects of negotiating a collective bargaining agreement in both the public and private sectors. Student participation together with practical demonstrations relating to arbitrations and typical bargaining problems. Study of all of the component parts of the collective bargaining process. Includes guest lecturers in the fields of arbitration, union organizing, implications of civil rights legislation, and public policy implications. Law 285 is recommended. Of interest to students seeking careers in employment or commercial law. 3 units. *Siegel*

312. Community Property. A survey of the marital property laws of Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington, and Wisconsin, with comparison to the Spanish system. Students may concentrate their studies on the law of one of the nine states. 2 units. *Staff*

315. Complex Civil Litigation. In many respects an advanced civil procedure class, this course will focus on the problems of large multi-party and multi-forum civil cases and how courts and litigants deal with them. Coverage will include: joinder devices, especially (but not only) class actions; federal multi-district transfer and consolidation; big-case discovery problems; case management techniques and issues; ways of accelerating or terminating potentially or actually protracted cases, including settlement, alternative dispute resolution, representative trials, and claims processing facilities; attorney fee awards; preclusion; and possible reforms. 3 units. *Staff*

320. Constitutional History: The Modern Era. The contemporary law of the U.S. Constitution is the end product of over two centuries of legal and political development, in the course of which a rich, conflicted tradition of discussion and debate has emerged as the mode by which this society resolves many of its basic debates over questions of political power and social morality. This course examines the history of that tradition from the founding era to the Reconstruction period. Special attention given to early views of national authority, the rise of Jeffersonian democracy, slavery as a

constitutional issue, and developments during the Civil War and Reconstruction. 3 units. *Staff*

322. Advanced Copyright Law. Instruction in advanced copyright law with particular emphasis on contemporary practice, theory, and current literature in the field. Substantial attention will be paid to issues in the Internet environment (for example, copyright protection and infringement liability in cyberspace). Prerequisite: prior enrollment in Law 270. 2 units. *Southwick*

323. Corporate Reorganization and Bankruptcy. Examination of legal and financial conflicts arising public firms' use of debt; Bankruptcy Code's standards for corporate organization, such as absolute priority, cram-down, equitable subordination, consolidation of financial structure of holding companies; how those standards affect prebankruptcy financing transactions; destructive bankruptcy problems arising from extensive use of junk bonds; implications of economic and financial theory for corporate reorganization policy. 3 units. *Schwarcz*

324. Corporate Restructuring. See C-L: Business Administration 455. 3 units. *Staff*

325. Corporate Finance. Focus on three distinct but interrelated components: an introduction to the social science discipline of financial economics, the application of valuation methodology in corporate transactional contexts, and an examination of the legal norms and economic constraints that affect firm financing and capital structure. Investment securities other than common stock (bonds, debentures, preferred stock, and convertible securities) examined in depth. Exploration of the potential and limits of contracting as a device fairly to allocate risk in dynamic, multiplayer financial markets. Law students completing the course will be sufficiently familiar with valuation techniques to take Law 324. 3 units. *Bradley and DeMott*

326. Corporate Taxation. A study of the special provisions of the Internal Revenue Code concerning the tax effects of the major events that occur in the life span of a corporation, including the taxation of distributions to shareholders and the formation, reorganization, and liquidation of corporations. Prerequisite: Law 255. 3 units. *Cummings*

330. Criminal Law: Federal. A study of federal criminal jurisdiction and selected federal crimes, including the major offenses used to prosecute political corruption at the federal, state, and local level, drug offenses, conspiracy and organized crime (RICO), forfeiture, and the sentencing guidelines, with an emphasis on the exercise of prosecutorial discretion in the federal system. A paper and participation in two simulated appeals are required, and enrollment is limited to 24 students. For additional information see the law school web site. 3 units. *Beale*

335. Economic Analysis of the Law. The course begins with a brief overview of elementary microeconomic theory, using examples drawn from various legal fields. It then explores the theory that the development of the common law can best be explained as a pursuit of efficient legal rules. Finally, application of economic theory to selected special topics in the law is examined. 3 units. *Culp*

336. Economic Regulation in Japan. Examination of the economic regulations of Japan in comparison with the United States, (primary focus on Japan) by exploring some basic assumptions and differences of their regulatory approaches. Characteristics of regulatory styles discussed in the context of deregulation and privatization, centralized versus decentralized control, consensus-based versus rule-oriented regulations. Students contribute by choosing topics of individual interest such as telecommunications, distribution, financial institutions, land use and housing, employment and labor, and medical care and welfare. 2 units. *Fujikura*

340. Estate and Gift Taxation. A study of the rules governing federal taxation of wealth transfers. Prerequisite: Law 255 (may be taken concurrently); a prior or concurrent enrollment in Law 295 is recommended. 3 units. *Shaw*

342. Federal Courts. Ways in which federalism and the separation of powers affect federal courts and relations with other branches and the states. The jurisdiction of the federal courts, original and appellate: justiciability, Congressional authority to define and limit, diversity and federal question jurisdiction, removal, and supplemental jurisdiction; some aspects of the law applicable in federal court: *Erie*, federal common law, implied rights of action, civil rights actions and immunities of officials and governments; statutory and decisional abstention requirements; and judgments: direct review of state and federal decisions, federal-state *res judicata*, and collateral attack via habeas corpus. 3 units. *Underkuffler*

343. Fiduciary Obligation. Examination of the operation and significance of fiduciary obligation (obligation to be loyal to the interests of another person in preference to self-interest). Relationship to contract law. Common themes and problems in relationships subject to fiduciary norms. The law governing agency and partnership, relationships in which fiduciary obligation is intrinsic. The increasing application of fiduciary norms, obligations to act in good faith, long-term commercial relationships. Examples of complex statutory schemes, such as those regulating employee benefit plans and investment advisers, that impose fiduciary obligations on persons serving in designated capacities. 3 units. *Staff*

344. Fundamentals of Commercial Law: Debt and Security. A study of commercial and consumer credit with primary emphasis on Article 9 of the Uniform Commercial Code. Examination of state law rules governing collection of debt in the absence of security. Focus on security interests under Article 9 including requirements for the creation of such interests, rules governing priority disputes among secured creditors, and rights enjoyed by a secured creditor upon the debtor's default. 3 units. *Howard*

345. Gender and Law. This course examines topics in law relating to the law's treatment of and impact on women through a series of different theoretical perspectives that produce alternative understandings of the relationships between gender and law. Theoretical perspectives include formal equality, substantive equality, dominance theory, different voice theory, autonomy, and postmodern anti-essentialism. Substantive topics range from government benefits, family law, employment, domestic violence, and education to rape, contraception, abortion, and adolescent pregnancy. The course emphasizes relationships between theory and practice. 3 units. *Staff*

347. Health Care Law and Policy. A survey of the legal environment of the health services industry in a policy perspective, with particular attention to the tensions and trade-offs between quality and cost concerns. Topics for study: access to health care; the clash between professionalism and commercialism, including antitrust law; personnel licensure; private personnel credentialing and institutional accreditation; hospital organization and staff privileges; professional and institutional liability; cost-containment regulation, including certification of need; cost controls in government programs. Of interest to students interested in public policy and in law and economics as well as those with specific interests in the health care field. 3 units. *Havighurst*

352. International Business Transactions. A case-study approach to drafting and negotiating documentation for complex, multijurisdictional international business transaction. Primary focus on the legal and practical aspects of multinational transactions, particularly in emerging markets; secondary focus on the broader political, social, and normative implications of such transactions. Topics include: international licensing, joint ventures, international securities offerings, concessions, debt swaps, and privatization. 3 units. *Wallenstein*

354. International Human Rights. Aspects of international legal regulation of state conduct toward people within its jurisdiction. Development, strengths, and limitations of international human rights law; the mechanisms for human rights protection established by the United Nations, the Specialized Agencies, and quasi-judicial

international bodies such as the Human Rights Committee and the human rights commissions and courts in Europe, the Americas, and Africa; definition and implementation of economic, social, and cultural rights; role of agencies such as the World Bank; particular legal issues concerning refugees, indigenous peoples, and human rights during armed conflicts; case studies. The influence of international standards on national law. 3 units. *Staff*

356. International Litigation and Arbitration. Students make oral responses to problems based on actual cases. Problems require interpretation of selected provisions of the Constitution, Judicial Code, Federal Arbitration Act, international conventions, Federal Rules of Civil Procedure, Uniform Commercial Code, and the Uniform Foreign Money Judgement Enforcement Act. Topics include jurisdictions of state and federal courts over transnational matters, foreign nationals and their assets, applicability of federal or state law to transnational events and disputes, making and enforcing arbitration agreements and awards. See the web for more information. 4 units. *Carrington*

358. International Organizations. An examination of the legal issues involved in the structure, functions, and operations of the United Nations and other international organizations within the international systems. Special attention will be given to International Organizations in Europe. 2 units. *Staff*

360. International Taxation. An examination of the federal income tax imposed on income earned in foreign countries either by citizens and residents of the United States or by foreign corporations that are controlled by citizens and residents of the United States. This course also includes a study of the federal income tax imposed on nonresident aliens and foreign corporations on their income derived from United States sources. Prerequisite: Law 255, 326 (may be taken concurrently), or consent of instructor. 2 units. *Shaw*

361. International Trade. This course examines various topics related to the conduct of international business. Subjects covered are international private trade, including private international contracts, dispute resolution, and letters of credit; national and international regulation of trade in goods, including the GATT; international regulation of monetary affairs through the IMF; foreign direct investment and transfer of technology. 3 units. *Gann*

362. Law and Emerging Markets: Russia and the Former Soviet Union. Analysis of legal aspects of trade and investment in Russia. A concentrated and practical understanding of the problems associated with trade and investment in contemporary Russia as well as policies and conditions that determine specific issues. Topics covered include Russian legal environment; property ownership and privatization; company law and securities regulation; currency and foreign exchange; taxation; corruption and implications; civil and commercial law; intellectual property protection; judicial reform and dispute resolution. 3 units. *Newcity*

363. Legislation. A study of the factors involved in the development and passage of legislation, and in its interpretation by the courts. Topics covered include theories of legislation, legislative procedure and process, problems in drafting statutes, compilation of legislative histories, and determination of legislative intent. Research paper or examination. 2 units. *Staff*

364. Japanese Business Law. Examination of the laws and practice governing Japanese businesses and business transactions including business environment, Japanese attitude toward contracts, negotiation and formation of contracts, products liability, and corporate law. Comparison drawn to the relevant domestic law. 2 units. *Kashiwagi*

369. Patent Law and Trade Secrets. An overview of the legal framework for patents, including statutory requirements for patentability, disclosure requirements,

infringement analysis, special problems of collaborative and competitive research, international issues, and the role of patent counsel in litigation. Prerequisite: Law 270. 3 units. *Sibley*

371. Products Liability. A general survey of the substantive law of products liability including tort law with an emphasis on strict liability in tort, contract law with an emphasis on warranty, and legislation and administrative law. A review of federal and state rules of civil procedure, particularly regarding discovery, as they apply in the products liability context. Finally, a focus on a limited number of specialized product areas to consider theoretical and practical aspects of handling products liability litigation. 3 units. *Staff*

372. Professional Liability. The past fifteen years have seen a significant increase in the number, as well as the complexity, of claims asserted against professionals. The potential liability of attorneys, accountants, doctors, architects, and other "professionals" is a matter of great importance given the significant resources expended in providing professional services in the United States. This course will analyze the contours of liability principles in professional malpractice cases in the context of the legal, medical, and accounting professions. In addition, this course will study the interaction of malpractice cases with professional ethics and the theory of self-regulation. 3 units. *Staff*

380. Research Methods in International, Foreign, and Comparative Law. A survey of methods, techniques, and strategies for international, foreign, and comparative legal research, including the efficient use of LEXIS, WESTLAW, and the Internet. Examination of treaty law, the law of international organizations, European Union law, civil law and other foreign legal systems, and international litigation and business transactions. Students complete several research projects, including an annotated bibliography, on topics chosen in consultation with the instructor. Course required for students enrolled in the J.D./LL.M. in Comparative and International Law. Other students may be admitted by consent of instructor. 2 units. *Topulos*

384. Securities Regulation. A study of the federal and state securities laws and the industry they govern with emphasis on the regulation of the distribution process and trading in securities; subjects dealt with include the functions of the Securities and Exchange Commissions, registration and disclosure requirements and related civil liabilities, "blue-sky" laws, proxy solicitation and reporting requirements, broker-dealer regulation, the self-regulatory functions of the exchanges, and the regulation of investment companies. 3 units. *Cox*

385. Securities Regulation II. This class will focus on selected current issues in securities regulation and financial institution regulation. The selected issues will be explored in fact-specific settings from a client-oriented, hands-on perspective. One of the fact settings will involve a complete review of a major corporate transaction, such as an acquisition, recapitalization, or leveraged buyout. Emphasis will be placed on identifying the specific legal issues involved and evaluating the range of alternatives available to the client to achieve its business objective. Course work will include three or four memoranda of three to five pages each. Two of the memoranda will be done on a team basis, with each team consisting of two to three students. 3 units. *Hart*

388. Social Science Evidence and Law. Social science evidence has come to play an increasingly important role in civil and criminal cases at all levels of American courts. It is used, for example, in cases involving issues of trademark infringement, obscenity, discrimination, identification of criminal offenders, potential jury prejudice, misleading advertising, eyewitness reliability, sexual assault, self defense, dangerousness, and the fashioning of remedies. The goal of this course is to teach law students to become sophisticated consumers and critics of social science evidence. 3 units. *Vidmar*

390. Structuring Commercial and Financial Transactions. In exciting and innovative areas of legal practice, companies have been raising money through structures intended to separate assets from risks associated with the company. Assets are then dedicated to repayment of capital market securities. "Structured finance" or "asset securitization" brings together fundamental legal disciplines, including bankruptcy, securities law, corporation law, secured transactions, finance, and tax. Topics include commercial financing techniques and concepts, guarantees, loan agreements, letters of credit, interest rate, and currency swaps; how capital markets work, rating agencies, cross-border and transnational considerations. Development and analysis of finance transactions. Consideration of ethics. 2 units. *Schwarzc*

393. Trademark Law and Unfair Competition. Current trademark and unfair competition law inspected from three different view points: theory, case law, and litigation strategy. If enrollment allows, practical drafting assignments will partially replace the final examination. Prerequisite: Law 270. 2 units. *Staff*

CLINICAL COURSES

400. AIDS Legal Assistance Project (Clinical Course). An in-house legal clinic for persons with HIV/AIDS. Students will represent, under close supervision, persons with HIV/AIDS in document preparation (wills, living wills, health care powers, and powers of attorney); government benefits (medicaid, medicare, social security disability, food stamps); permanency planning for children; insurance coverage; guardianship proceedings; employment and housing discrimination; other cases affecting the legal rights of persons with HIV disease. Each student will have an individual case load and will be required to spend one hundred hours on clinic cases. Prerequisite: Law 245, Law 301, may be taken concurrently. 4 units. *McAllaster and Wettach*

405. Appellate Practice (Clinical Course). Primarily taught by members of the federal judiciary. Covers the appellate process and the proper techniques involved in brief writing and oral advocacy. Each student is required to write an appellate brief with another student. In November, students may argue their briefs before members of the Moot Court Board before arguing for a grade before a visiting federal judge. Recommended for students who plan to participate in the Dean's Cup Moot Court Competition in the spring. The problem assigned will be the same one used in the competition second semester. Although the course is helpful for Dean's Cup, it is not a prerequisite for participating in the competition. Students who cannot take the course are eligible for Dean's Cup. 2 units. *Beale*

420. Civil/Criminal Trial Practice (Clinical Course). An introduction to the civil and criminal litigation process and attendant skills. Emphasis on the interactions between attorneys and witnesses and between lawyers and juries by use of simulation and videotape pedagogy. Areas of inquiry include opening statements, closing arguments, direct- and cross-examination of lay and expert witnesses, objections, introduction of evidence, and trial preparation. Each student completes the course requirements by participating as counsel in a full jury trial. In the spring semester, instruction is concentrated in the first half of the semester. It begins with an intensive weekend of instruction in January. See the web for more information. Prerequisite: Law 245. 3 units. *Becton, Beskind, Sandra Johnson, Kuniholm, or T. Maher*

423. Civil Pretrial and Trial Practice (Clinical Course). This course uses simulated exercises to introduce the students to all aspects of the civil litigation process. The instructors will serve in the role of senior partners and the students will act as associates in competing law firms to work through a civil case to develop skills in the areas of interviewing, fact investigation, case evaluation and strategy, preparation of pleadings, pretrial motions and conferences, jury selection, opening statements, introduction of evidence, direct and cross examination, trial motions, closing arguments, and posttrial

motions. The course will end in a jury trial. Prerequisite: Law 245. 3 units. *Glenn*

430. Criminal Litigation (Clinical Course). An examination of the lawyering process in criminal cases from the point of view of the criminal justice practitioner. Using videotape simulation, students will participate as attorneys in simulations of various stages of the criminal justice process from initial interview through trial, with special emphasis on pretrial proceedings. The clinical phase of the seminar requires each student to practice with criminal justice practitioners pursuant to the North Carolina Rules Governing Practical Training of Law Students. Placements include district attorneys, the public defender, and private defense counsel. Prerequisites: Law 226, 245, and 420. 4 units. *T. Maher and Rudolf*

435. Death Penalty Clinic (Clinical Course). Includes a seminar and a field component. The seminar examines doctrine governing selection of cases to be tried capitalily and the imposition of the death penalty, concluding with a substantial research paper. The field work begins with skills training. Students are assigned to work with defense attorneys who are handling a defendant's conviction and death sentence. Students are not able to appear in court because of the charges and serious consequence at stake. Placements often involve analysis of trial transcripts, development of legal and factual issues, and traditional legal research. Students are required to complete one hundred hours of work with their placement. 5 units. *Cindy Adcock, J. Coleman, and Mosteller*

440. Estate Planning (Clinical Course). An examination of the problems and techniques of estate planning and administration, including the income taxation of trusts and estates. Students prepare planning recommendations and draft related documents for hypothetical clients. Prerequisites: Law 255, 295, 326 (may be taken concurrently), and 340. 3 units. *Shaw*

445. Forensic Psychiatry (Clinical Course). This course is designed to provide the student with a working knowledge of the major areas of interface between psychiatry and law. Basic concepts of clinical psychiatry and psychopathology will be highlighted. Attorney and psychiatrist roles in the commitment process, right to treatment and right to refuse treatment, competency to stand trial, and criminal responsibility will be explored. Discussion of assigned readings, short lectures, interviews and observation of patients involved in legal proceedings, films, guest speakers, and field trips will form the basis of the course. 3 units. *Sally Johnson*

448. International Development (Clinical Course). This clinic is primarily concerned with assisting developing countries with legal research related to designing and implementing the framework legislation and regulation necessary for development. Where the courts make use of foreign and international law in interpreting constitutional and statutory law, the clinic will provide research support. Students and particular ministries of South Africa will have responsibility for legal issues facing the new nation as it seeks to promote development and overcome a history of inequitable legal arrangements and policies. Prerequisite: Law 277. 4 units. *Catherine Adcock*

460. Negotiation and Mediation (Clinical Course). This course is designed to explore the processes of negotiation and mediation in legal and quasi-legal contexts. Approximately 50 percent of the time will be devoted to theory about the social processes involved in the development of conflict and its resolution. The other half of the time will be devoted to case analysis, simulations, and related participation activities intended to give the student insights into styles and strategies of negotiation and mediation. 3 units. *Beason, Dimond, Ellis, or Vidmar*

470. Poverty Law (Clinical Course). Study of poverty, poverty programs, and the U.S. civil justice system. Topics include history of access to justice, demographics of poverty, a skills workshop on client-centered interviewing, food and income programs, health law, economic development, family law, employment, housing, and education.

Students will interview a Legal Services client. Please see the law school web page for more information. 3 units. *Spruill*

SEMINARS

Courses under this subheading that are listed as taught by Staff are unlikely to be offered during the 1997-98 academic year.

503. Athletics and Antitrust (Seminar). An examination of the economic structure of professional and college sports and the antitrust implications of centralized control through leagues and associations. Among the matters to be considered are the antitrust issues raised by rules controlling player movement, league control of franchise relocation, limitations on ownership rights, NCAA control of broadcast arrangements, and restrictive definitions of amateurism. Prerequisite: prior or concurrent enrollment in Law 285. 2 units. *Staff*

506. Black Legal Scholarship (Seminar). The legal scholarship of black and other legal scholars on the relationship between race and the law. The influence of race on the interpretation and formation of law in constitutional and statutory settings. Examination of materials including cases, law review articles, books, and nonlegal material. Purpose: to permit participants to answer whether there can be a black perspective on the law, and what such a perspective has to say about substantive areas of the law including constitutional law, torts, property, and criminal law. Also, how black legal scholarship fits in with extensive feminist legal scholarship and other "parochial" concerns in this age. The concern that "black" is used to mean only black men, not black women. 2 units. *Staff*

508. Chinese Law and Society (Seminar). Survey of Chinese legal thought and practice in the People's Republic of China. Focus on the relation of law to social ideals, to social change, and to politics. Consideration of socialist theories of law, conventional criminal and civil processes, informal and extrajudicial institutions, international law, and trade law. Prior familiarity with Chinese history or politics is unnecessary. 3 units. *Staff*

509. Chinese Legal History (Seminar). A survey of Chinese legal history that focuses on late imperial law in the Qing dynasty (1644-1911). Attention given to the legal transformations in the twentieth century. Examination of the way in which a legal system creates and reflects a society's structures and values in a mutually interactive process that constructs a particular "legal sensibility." Readings drawn from Chinese codes, cases, and "detective novels" as well as, for comparative purposes, from European and American legal history. No previous background in Chinese history is required or expected. 3 units. *Gao and Ocko*

512. Comparative Public Law and Policy: Ethnic Group Relations (Seminar). An interdisciplinary seminar to appraise various approaches to the reduction of conflict in deeply-divided societies, primarily in Asia and Africa. Substantial attention will be paid to the nature of ethnic identity, the sources of group conflict, and the forms and patterns it takes. Consideration will be given to methods of analyzing social science materials and utilizing them for the design of policies, laws, and institutions. Approaches include federalism, regional autonomy, electoral law, parliamentary and presidential arrangements, programs to prefer under-represented ethnic groups in education, employment, other spheres of economic activity. Emphasis on forecasting and evaluating the impact of alternative approaches. 3 units. *Horowitz*

513. Campaign and Election Law (Seminar). Examination of the legal issues that arise during the course of local, state, and federal political campaigns and on election day, plus related areas. Subject matter areas addressed in the general order faced by, and from the perspective of, a typical campaign. Topics include precandidacy activities, campaign finance laws, Federal Elections Commission and state boards of election, regulation of paid political advertisements, defamation, interaction with other political

interest groups (for example, parties, PACs, and independent expenditures), enfranchisement and registration, election day issues, challenging voting results, and redistricting. 2 units. *H. Dellinger*

515A. The Congress: Government, Business, and Public Policy. Study of evolving relations between business and government at all levels. Focus on United States Congress—decision making, effects from outside influences, changes in interaction. Application of principles to executive branch, regulatory agencies, state and local governments. Study of relationship between multinational corporations and nation states, changes in global economy. C-L: Public Policy Studies 281. 3 units. *Kaufman and Schroeder*

515B. The Congress (Seminar). Examination of the Congress, concentrating on its operations in our constitutional system, influences of forces, and constraints on members. Examination of roles of constituents, interest groups, media, staff, leadership, and administration. Topics include campaign reform, congressional ethics, budget, role of committees, and processes of legislating, conducting oversight, and approving nominations and treaties. 3 units. *Kaufman and Schroeder*

518. Constitutional Law II. Federal constitutional law is at once a central and a highly controversial part of contemporary American law. The great expansion of issues subject to serious constitutional review by the courts, and the consequent profusion of judicial doctrines, necessarily mean that introductory courses in constitutional law omit or treat only fleetingly important areas and issues. This course will focus on a specific topic or doctrine in constitutional law, read extensively in the relevant case law, and examine the works of selected commentators. The topic addressed this semester is the law of the presidency: the president's independent constitutional authority and the office's relationship to Congress and the judiciary. 3 units. *Powell*

520. Theory of Constitutional Adjudication (Seminar). Examination of the role of the Supreme Court and method of deciding constitutional issues. Topics include "original intent," interpretation, uses of history, legislative motive, legislative facts, interest balancing. Also, coverage of left and right critiques of mainstream constitutional doctrine, some illustrative application of these "method" questions in recent cases. Prerequisite: Law 120. 2 units. *Staff*

522. Contemporary Jury (Seminar). The jury plays a central role in American criminal and civil law. Its effects extend beyond the cases that are tried before it because it sets the standards around which settlement negotiations occur. It is a controversial institution that has been vigorously defended by some and severely criticized by others who have labeled it incompetent, biased, capricious, and irresponsible. In this seminar we will explore the role and performance of the jury in modern American society. 2 units. *Staff*

525. Corporate Restructuring (Seminar). A case study approach to advanced bankruptcy issues raised by Chapter 9 and Chapter 11, using recent pleadings and decisions in cases involving Texaco, Insilco, Eastern Airlines, Orange County, Continental Airlines, VMS Properties, and DeLaurentis Entertainment. Prerequisite: Law 308 or consent of instructor. 2 units. *Coyne*

526. Dispute Resolution. One of the most significant recent developments in civil procedure is the evolution of alternative methods of resolving disputes. Under the general label of alternative dispute resolution (ADR), courts and private parties are increasingly using nontraditional methods to resolve disputes that previously were resolved through the traditional court process. Course materials will cover negotiation, arbitration, and mediation, as well as specific ADR techniques such as the mini-trial, court-annexed arbitration, and the summary jury trial. Special attention to empirical analysis of the impact of alternatives. 3 units. *McGovern*

527. Employment Discrimination: Advanced Topics (Seminar). Focus on the problems of complex employment discrimination litigation. Topics include psychological and behavioral aspects of discrimination, systemic discrimination, class actions involving pattern and practice claims, remedies, and settlements. Consideration of hostile work environment claims and the overlap between race and gender as a case study, using materials developed in actual cases. Exploration of mediation as a means of resolving employment discrimination claims prior to litigation. Prerequisite: Law 232. 2 units. *J. Coleman*

530. Entertainment Law (Seminar). An introduction to selected theories, statutes, and regulations (other than intellectual property law) governing principal undertakings, business transactions, and legal relationships in the entertainment industry, including publishing, the theater, television and motion pictures, music, and related fields. Prerequisite: concurrent or prior enrollment in Law 270. 3 units. *Lange*

533. Ethical Issues in Civil Litigation (Seminar). This seminar will examine various ethical and professionalism issues relating to the conduct of civil litigation. It will include a detailed examination of those procedural rules and developments relating to the conduct of attorneys, most notably Rule 11. In addition, the seminar will investigate the origins of "zealous advocacy" and explore recent criticisms of that notion. Other specific topics will include (1) ethics and negotiation; (2) the lawyer's ethical duties to consider or use alternative dispute resolution; and (3) work-product and attorney-client issues in civil litigation. Enrollment limited to sixteen. 2 units. *Staff*

537. Ethical Issues in Gratuitous Transfers and Taxation (Seminar). An exploration of professional responsibility issues that arise in the representation of individuals and families in private, noncommercial relationships, including trusts and testamentary dispositions of property, as well as consideration of ethical issues in the attendant tax practice. 2 units. *Shaw*

538. Ethical Issues for Lawyers in Corporate Law and Practice (Seminar). This course examines a range of ethical issues for lawyers in transactions and litigation involving corporate parties. In particular, the course examines ethical issues incident to negotiating and advising in transactional contexts, to litigation brought on behalf of a corporation's shareholders or derivatively on behalf of the entity itself, and to dimensions of relationships between a corporate client and its inside and outside counsel. Prerequisite: Law 210, which may be taken concurrently. 2 units. *Staff*

541. Exempt Organizations (Seminar). Consideration of state and federal regulation of nonprofit entities, with attention to organization of such entities under state law. Qualification for exemption from taxes will be examined, along with the applicability of special taxes that other organizations are subject to, including taxes on prohibited self dealing, failure to meet minimum distribution requirements, and conduct of a business unrelated to the exempt purpose of the organization. Examination of limitations on deductions for charitable contributions, and the state and federal regulation of fund-raising and lobbying activities of exempt entities. 2 units. *Schmalbeck*

543. Federal Practice of Civil Rights and Civil Liberties (Seminar). A study of advanced constitutional law and federal practice, working through a series of problems to provide: (a) familiarity with the principal federal statutes (procedural, substantive, and remedial) used in civil rights litigation; (b) their judicial interpretation and application; and (c) a consideration of frontier constitutional issues. 3 units. *Van Alstyne*

548S. Development of United States Courts of the Fourth Circuit (Seminar). Examines judges, courts, and law of United States district and old circuit courts and Court of Appeals: Maryland, Virginia, West Virginia, North Carolina, South Carolina, 1789-1958. Consent of instructor required. C-L: History 255A and Political Science 238S. 3 units. *P. Fish*

549. Governance, Responsibility, and Crime in the Public Corporation (Seminar).

This seminar will examine three related but distant themes common to discussing the misbehavior of the public corporation. Misbehavior is defined broadly to include poor financial performance, the manufacture of unsafe products, the pollution of the environment, and criminal misconduct. The first theme is how the current structure of the corporation contributes to its malfunctioning. To this end, we will examine the experiences of other countries that have different ownership structures. The second theme is how we define responsible behavior and the costs and benefits of asking corporations to be responsible citizens. The final theme is the mechanisms within the criminal justice system for imposing misconduct of others. 2 units. *Cox*

550. Health Care: Emerging Issues (Seminar). Although there are no prerequisites, this seminar may be taken either as an extension of Health Care Law and Policy (347) or for advanced study in antitrust law. Topics to be addressed include the legal accountability and regulation of managed care organizations (including ERISA issues); quality assurance; private contracts as instruments of health care reform; provider networks and related antitrust issues; conversion of nonprofit hospitals to for-profit status; and hospital mergers. 2 units. *Havighurst*

552. The Public Profession of the Law (Seminar). Conducted as a collective individual study. Students evaluate the public ethics of lawyers involved in the event, including scrutiny of the social and political context in which particular acts occur. Paper topics, chosen with instructor approval, will be events in the history of the United States in which law and lawyers were prominently involved. 3 units. *Carrington*

555. International Environmental Law (Seminar). Mechanisms, institutions, rules relating to regional and global environmental issues. Responsibility and liability in international law for environmental damage; marine pollution, and the role of the International Maritime Organization; regulation of transboundary atmospheric pollution, ozone-depleting gases, cross-border movement, disposal of hazardous wastes; regulation of nuclear activity and the role of the International Atomic Energy Agency; special environmental regimes; conservation of endangered species and areas through CITES, the World Heritage convention, other treaties; deforestation and biodiversity; the role of UNEP, regional, bilateral bodies; regulation of greenhouse gas emissions. 2 units. *Staff*

557. International Law and International Relations (Seminar). Fundamental topics about the nature of international law and its roles in international relations. Recent work by lawyers and specialists is assessed and applied to analysis of major practical problems in international law. Issues include: authority and justification in international law; claims to coherence in the discourse of international law; explanations of cooperation among states, and its limits; relations between municipal, transnational, and international levels of law; the place of law in the formation, maintenance, change, and termination of international regimes and institutions; means for measuring and evaluating compliance or noncompliance; and problems in the international legal system. Prerequisite: Law 275 or 354. 2 units. *Staff*

560. Israeli Law (Seminar). A study of various areas of Israeli law in a comparative perspective to the common and civil law. Examination of the Israeli legal system starting from Ottoman and British regimes to establishment of the state of Israel. Detailed examination of Israel's public law (government structure and human rights within constitutional and administrative law). Exploration of Israel's commercial and corporate law including contract, tort, corporate, securities, property, and tax law. 2 units. *Staff*

563. Jewish Law (Seminar). Study of factors (cultural and juristic) in the development of Jewish law, especially in the Talmudic and medieval periods; relationship between "religious" and "civil" law; the legal codes and the decision-

making process of the rabbinic courts. Some legal texts (in translation) will be submitted to intensive examination. 2 units. *Golding*

566. Judicial Responsibility (Seminar). This seminar will examine a number of topics relating to the judicial role in dispute resolution. Topics will include (1) the judge's duty of recusal; (2) judicial first amendment rights to comment on pending cases or to participate in political activity; (3) judicial obligation and authority to control the legal profession; (4) ethical issues raised by active judicial management; (5) ethical duties in judicial decision making; and (6) the propriety of judicial involvement in the settlement process. 2 units. *Hoeveler and Wetherington*

568. Justice, Law, and Commerce in Islam. Islamic approaches to the legal and ethical regulation of social life. C-L: African-American Studies 254 and Religion 254. 3 units. *Staff*

572. Law and Development: Markets, Democracy, and Ethnicity in the Developing World (Seminar). This seminar will critically survey the legal work being done by practitioners and academics in Latin America, Southeast Asia, and the former Soviet Union. Final paper instead of examination. 2 units. *Staff*

574. Legal Intervention in Domestic Violence (Seminar). Exploration of three interdisciplinary elements of legal intervention in domestic violence: 1) the psychology of battering; 2) the social science research that has the effectiveness of domestic violence interventions; 3) theory and critique of these legal interventions. Within each of these three sections, topics include: the dynamics of domestic violence, why men abuse, and the coping processes of battered women; studies of police arrest, prosecution, and restraining orders; and discussion of a wide range of criminal and civil remedies/policies such as mandatory arrest, no-drop prosecution, reformed restraining order laws, court-ordered treatment for batterers, and self-defense for battered women who kill their spouses. 2 units. *Fischer*

575. Legal Writing: Advanced (Seminar). Intensive practice in various modes of legal writing, using workshop-style critiquing of drafts, peer review, and computerized aids as well as feedback from the instructor. Critiques will be on all aspects of writing, including style, substance, and structure. 2 units. *Staff*

578. Liberalism, Religion, and the Law (Seminar). Includes readings of basic texts on the history of liberal thought (Hobbes, Locke, Kant, Mill, Rawls). Consideration of the religion clause of the first amendment in the context of the recent writings by people like Steve Smith, Kent Grunewald, Michale McConnell, Steve Carter, and others. 3 units. *S. Fish*

579. Mass Torts in Manifold Perspective (Seminar). An integrated and in-depth look at combination of issues raised by complex mass tort lawsuits; substantive tort law; civil procedure; litigation strategy; lawyer-client relationships; economics of settlement, ethics, judicial role, societal impacts. Exploration of eight to ten celebrated mass tort lawsuits such as Buffalo Creek disaster, asbestos, Dalkon Shield, Agent Orange, Woburn leukemia case, tobacco smoking, silicon breast implants, electromagnetic fields, medical malpractice. Readings will emphasize historical accounts that put litigation in context, as well as judicial opinions and scholarly commentary. 2 units. *Metzloff and Wiener*

580. Medical/Legal/Ethical Issues (Seminar). A seminar composed of students and faculty from the Medical, Law, and Divinity Schools that will critically consider selected pertinent issues of mutual professional interest. Students organized in cross-disciplinary teams make presentations on these issues, on which they also prepare detailed analytical outlines and extensive bibliographies. 2 units. *Shimm et al.*

581. Psychology of Litigation (Seminar). The litigation process inherently involves psychological perceptions and evaluations. What causes people to pursue legal rights in the first place? Why does settlement of disputes occur? What causes litigants to prefer

different types of resolution forums? How do jurors respond to witnesses and other types of evidence? The seminar addresses these and other questions by reference to empirical social science literature. 3 units. *Staff*

582. National Security (Seminar). A study of the separation of powers in national security matters; presidential war powers; the War Powers Resolution; the role of the judiciary in national security matters; congressional and presidential emergency powers; operational Law and the Law of War; internal and personnel security; the Freedom of Information and Privacy Acts; access to national security information in the federal courts; and restraints on disclosing and publishing national security information. See the web for more information. 3 units. *Everett and Silliman*

583. Philosophy of Law (Seminar). Focus on problems of legal and moral responsibility. Examination of a range of philosophical and legal writing on such related concepts as the will, action, intention, motive, negligence, causation, excuses, insanity, punishment, freedom, and moral luck. Prerequisite: previous exposure to philosophy or a strong interest in jurisprudence. 2 units. *Stone*

584. Political Philosophy and Law (Seminar). Examination of theories of community in classical and contemporary philosophical sources. Also, readings in some anthropologists and sociologists as well as legal theorists (principally Lon Fuller). Special attention paid to the relationship between theories of community and theories of rights and to the role of rights discourse in various kinds of dispute-settlement processes. Short weekly reports and a term paper will be required. 3 units. *Golding*

585S. Philanthropy, Voluntarism, and Not-for-Profit Management (Seminar). An examination of the role and functioning of the not-for-profit sector in relation to both the public sector and the private for-profit sector in dealing with significant social problems. 3 units. *Fleishman*

586. Property: Advanced Topics (Seminar). Examination of the concept of property, its place in liberal democratic theory, its usefulness in resolving current social conflict issues. The concept of rights. The particular right of property and the extent it should be placed beyond the democratic process. Property concepts used in resolving issues such as freedom, organ transplants, economic rights. First Amendment freedoms. 2 units. *Underkuffler*

587. Race and the Law (Seminar). Are we a colorblind society? Is English-only the way to go? Is there a model minority? Are Native American children better off with Native American parents? Should affirmative action be abolished? Are all women white and all blacks men? Was *Brown* right? Exploration of historical and contemporary treatment of race by courts and legislature. Examination of social and political forces that contribute to development of legal doctrine of education, employment, health care, interracial sex and marriage, public accommodations. Exploration of the definition of race, intersection of race and gender, interplay of race and class, juxtaposition of various ethnic groups, utility of biracial dichotomy in multiracial society. 2 units. *Staff*

588. Responsibility in Law and Morals (Seminar). Investigation of the relationship between responsibility in the law and moral blameworthiness; excuses and defenses; the roles of such concepts as act, intention, motive, ignorance, and causation. Texts: Holmes, *The Common Law*; Hart, *Punishment and Responsibility*; Morris, *Freedom and Responsibility*. 3 units. *Golding*

590. Risk Regulation (Seminar). Pursues an integrated analysis of society's efforts to deal with risks of harm to humans and other life. Study of the science, economics, and policy of risk leading to an examination of specific reforms of the laws and institutions of risk assessment and risk management that are currently being debated in the Congress. Prerequisite: Law 235 or consent of instructor. 2 units. *Wiener*

592. Telecommunications Law (Seminar). This seminar explores contemporary issues in international telecommunications regulation, especially in the United States;

emphasis will be on the future: the information highway; new technologies; and new legislative and market strategies in America and elsewhere in the world. Frequent guest lecturers. Prerequisite: Law 270. 3 units. *Lange*

593. Sexuality and the Law (Seminar). This is a course about how sexuality affects the structure and enforcement of legal rules and regimes, and how sexual orientation influences the application of legal rules to individuals in our society. Much of this course will center around discussions of gay, lesbian, and bisexuality, but the course will end with a section on heterosexuality. 2 units. *Staff*

INDEPENDENT STUDIES AND TUTORIALS

605. Chinese for Legal Studies. An introduction to the terminology and basic concepts of Chinese law. Reading and analysis of legal texts (codes, cases, contracts, wills). Communication about law and law-related issues in Chinese. Prerequisites: three semesters or equivalent of Chinese and consent of instructor. 2 units. *Yang*

610. Exchange Program. Credit/no credit. 14 units. *Staff*

620. Externship in International Law. Credit/no credit. 14 units. *Staff*

630. French for Legal Studies. An introduction to the terminology and basic concepts of French law. Reading and analysis of legal texts (codes, cases, contracts, wills). Communication about law and law-related issues in French. Prerequisites: three semesters or equivalent of French and consent of instructor. 2 units. *Mirandes*

635. German for Legal Studies. An introduction to the terminology and basic concepts of German law. Reading and analysis of legal texts (codes, cases, contracts, wills). Communication about law and law-related issues in German. Prerequisites: three semesters or equivalent of German and consent of instructors. 2 units. *Bernstein and Bernstein*

640. Independent Research. Law students in their second and third year of the J.D. or LL.B. programs may undertake up to four semester hours of independent research in any academic year if the research is approved by a faculty member. Research will be graded on a credit/fail basis. Students undertaking independent research will meet regularly with the faculty member supervising the research in order to ensure contemporaneous discussion, review, and evaluation of the research experience. Variable credit. *Staff*

650. Japanese for Legal Studies. An introduction to the terminology and basic concepts of Japanese law. Reading and analysis of legal texts (codes, cases, contracts, wills). Communication about law and law-related issues in Japanese. Prerequisites: three semesters or equivalent of Japanese and consent of instructor. 2 units. *Takatsu*

653. Legal and Business Russian. Introduction to Russian language and culture in the area of legal studies and conducting business in or with Russia and other Commonwealth of Independent States countries. Primary materials include contracts, advertising, and financial documents. Prerequisites: Russian 1 and 2 or consent of instructor. 3 units. *Staff*

655. Spanish for Legal Studies. An introduction to the terminology and basic concepts of Spanish law. Reading and analysis of legal texts (codes, cases, contracts, wills). Communication about law and law-related issues in Spanish. Prerequisites: three semesters or equivalent of Spanish and consent of instructor. 2 units. *Staff*

SUMMER COURSES

Courses under this subheading that are listed as taught by *Staff* are unlikely to be offered during the 1997-98 academic year.

Courses with suffix G are taught in Geneva

206G. Corporate Governance. A comparative examination of relationships among shareholders, directors, employees, and creditors. A brief introduction to relevant concepts in corporate law. Focus on current developments and disputes affecting corporate governance. Examination of a variety of institutional models and legal doctrines that define relationships among varied stockholders. 2 units. *DeMott and Sealy*

207G. Comparative Intellectual Property. An introduction to basic intellectual property doctrines from multiple national and international perspectives. Focus on key intellectual regimes of copyright, patents, and trademarks, using legislation and cases from a number of countries. Emphasis on registration of trademarks and service marks, on the patentability of biotechnological inventions and computer programs, and on some copyright related topics. 2 units. *Cherpillod and A. Christie*

225G. International Criminal Law. Study of ways in which states cooperate in the enforcement of respective penal codes. Topics include extradition, transfer of prosecutions, international arrest procedures, and securing evidence abroad. Focus on international criminal law, including international humanitarian law and human rights law. Topics include Nuremberg and Tokyo Tribunals, International Criminal Tribunals for the former Yugoslavia and Rwanda, prospects for a permanent International Criminal Court. 2 units. *Harari, Morris, and Roth*

226G. International Dispute Resolution. Study of three different methods of settlement of international business disputes: litigation, arbitration, and mediation. Concentration on formal mechanisms employed to resolve disputes with other governments. Emphasis on procedure governing the settlement of international trade disputes under the Agreement Establishing the World Trade Organization. 2 units. *Kaufman-Kohler and Shoyer*

230G. International Organizations. Study of the activities of international organizations and their features, including constitution, membership and functioning, normative action taken, and enforced action. An examination of humanitarian law and human rights in the Security Council of the United Nations. An introduction to South Africa's new constitution and areas in which the drafting process was directly guided by international standards. 2 units. *Dominice and Murray*

290G. Introduction to American Law. Examination of major elements of American law which pertain to civil practice, designed to acquaint students with traditional core of private law defining individual relations and business enterprises: contracts, corporate law and business associations, property and torts. An overview of American legal system and how it came into being. A view of the legal status of American colonies immediately prior to the American Revolution. Examination of the changes necessitated by the Revolution, including sovereignty and reception of common law in postcolonial United States. For non-U.S. students only. 2 units. *G. Christie and Metzloff*

Courses with suffix H are taught in Hong Kong.

207H. Comparative Intellectual Property. An introduction to basic intellectual property doctrines from multiple national and international perspectives. The focus of the instruction will deal with computer program and data protection as well as certain issues arising from the development of a global information highway. 2 units. *Staff*

208H. Constitutional Transitions. Examination of the process of the resumption of sovereignty over Hong Kong by China and the new constitutional order in Hong Kong. Particular attention to differing traditions of legality and the coexistence of different economic, political, and legal systems within one state. Contemporary constitutional change and implementation of bills-of-rights regimes. Attention to the Canadian Charter of Rights and Freedoms and the South African Bill of Rights. 2 units. *Bauman and Ghai*

209H. International Business Transactions. Focus on business in the People's Republic of China. Examination of vehicles for conducting trade in the PRC. Examination of tensions in several areas of international trade. Emphasis on problems posed by U.S. trade policies from a Hong Kong perspective. Special attention to U.S. regulation of textile imports and anti-dumping laws. 2 units. *Liu and Rhodes*

228H. Comparative and Transnational Insolvency. An introduction to insolvency law, with an emphasis on United States and Hong Kong, including both the bankruptcy of individuals and the liquidation of companies. 2 units. *Staff*

237H. International Human Rights. An examination of the system of public international law as it relates to human rights. Topics include: criminal and civil responsibility for war atrocities and genocide, the law concerning equality and discrimination, and the status of women, aliens, refugees, and other particular groups. The course focuses on controversies in which universal international standards may be in tension with national or regional cultures and legal systems. 2 units. *Staff*

248H. Legal Aspects of Trading. Focus on resolving various legal problems facing international foreign enterprises in transactions with Korean counterparts. Subjects include antitrust, import regulations, laws on foreign investment, intellectual property laws. Introduction of India's legal framework and judiciary. Study of new liberalized rules governing foreign investment as laid down in India's New Industrial Policy of 1991. Focus on basic features of Indian law in areas of company law, taxation, employment law, environmental law, intellectual property, and arbitration. 2 units. *Almeida and Chang*

272H. Securitization and Capital Markets. Explanation of why businesses look to capital markets rather than bank loans for financing. Introduction of fastest growing capital market innovation, securitization, and structured finance. Exploration of fundamental international principles of securitization that derive from commercial finance, bankruptcy, and tax. Also, how capital markets work both in the United States and abroad, illustrating the role of agencies and application of derivative products such as currency swaps. 2 units. *Fujita, Moriello, Sato, and Schwarcz*

275H. Transnational Securities Law. Topics include an overview of U.S. securities laws, regulatory challenges of internationalized securities markets, international public offerings, offshore offerings, extraterritorial application of U.S. securities laws. Emphasis on securities of Hong Kong, attention to securities laws of the PRC and a sample of Southeast Asian countries. 2 units. *Hillman and Tyler*

290H. Introduction to American Law. An examination of the institutional context, legal terminology, and basic legal research techniques necessary for understanding and using American law. An introduction to foundational legal principles that govern core areas of private law as well as an examination of the major elements of American law that pertain to civil practice. For non-U.S. students only. 2 units. *Bernstein and Conner*

Degree Programs



The First Professional Degree in Law

Juris Doctor. Upon favorable recommendation of the faculty, the degree of Doctor of Law (J.D.) will be conferred upon students who have successfully completed the following requirements:

1. six semesters in residence at Duke, during a minimum of eighty-four weeks of class; and
2. a passing grade in courses aggregating eighty-four semester-hours; and
3. a grade-point average of at least 2.1 and status in good standing under the rules of the Law School.

Three hours of credit toward the J.D. degree (six with special permission of the Administrative Committee), may be earned in courses taken at Duke outside the Law School in the Graduate School, in upper-level undergraduate courses, or in courses in foreign languages.

Two semesters of law study undertaken at another accredited American law school may be counted toward the required total if the final two semesters (exclusive of a summer session) and at least fifty-four semester hours of law study are completed at Duke, except as specifically authorized by the law faculty.

Bachelor of Law Degree. Upon favorable recommendation of the faculty, the degree of Bachelor of Law (LL.B.) will be conferred upon students who have satisfied all of the requirements listed above as necessary for the Doctor of Law degree but who do not possess a baccalaureate degree before completing the program of study for the Doctor of Law degree.

Joint Degrees for Enrichment: Summer-Entering Programs

Master of Arts for Law Students. The School of Law and the Graduate School of Duke University jointly sponsor a program of study in law and several alternative disciplines, including cultural anthropology, economics, English, environmental studies, history, mechanical engineering, philosophy, political science, psychology, public policy science, Romance studies, and an interdisciplinary program in the humanities. The purpose of the program is to encourage the broader intellectual interests of law students and to foster dialogue between law and related disciplines. Upon satisfactory completion of the required course of study, candidates will be awarded both the M.A. or M.S. and J.D. degrees.

Students enter the joint J.D./M.A. (or J.D./M.S.) program in the summer before the first year of law school, undertaking part of the first-year law curriculum. Throughout their remaining six semesters in residence, students will combine their legal studies with courses selected from the Graduate School curriculum, generally taking one or

two Graduate School courses per semester during the first year and five more in the final four semesters, for a total of eight Graduate School courses.

Master of Laws (International and Comparative Law). Since 1985, the Law School has offered the opportunity to selected J.D. candidates to pursue a Master of Laws degree emphasizing international and comparative law study contemporaneously with their study for the J.D. degree. Students accepted to this joint degree program will enter in the summer, undertaking part of the regular first-year curriculum with students who are enrolled in the joint J.D./M.A. summer program. During the remaining six semesters of law study and in a four-week period of summer study at Duke's Summer Institute in Transnational Law at the University of Geneva in Switzerland, or its Asia-America Institute in Transnational Law in Hong Kong, or in another approved program, J.D./LL.M. students will complete requirements for both degrees. Candidates for the LL.M. degree will be required to complete twenty credit hours of approved courses, which must include international law (public), comparative law, research methodology in international, foreign, and comparative law, and coursework or an independent study for which a significant piece of writing is required. Candidates must obtain a minimum grade point average of 2.5 in these courses. Students must also show competency in at least one foreign language. Six of the twenty hours required for the LL.M. may be taken in the Graduate School or in upper-level undergraduate coursework, including advanced language study. Beyond the required courses, the courses applied toward the LL.M. consist primarily of those in international, comparative, and foreign law at the Law School and at one of the Institutes in Transnational Law but may also include courses taken in related fields in other divisions of the university. The area studies program at Duke is particularly rich in courses dealing with Canada, China, Germany, and Japan.

Accelerated J.D. Program

Since 1990, the Law School has offered a program under which students may earn a J.D. degree in less than three years. Participants begin Law School during the summer before the first year, attending classes with joint degree candidates. During a later summer they must attend classes at another ABA/AALS-accredited law school. While not for everyone, this program will enable participants to reduce by about six months the time required to obtain a J.D. degree, which may have the effect of lowering the effective cost of a legal education. At the time of their application for admission, interested students must designate that they are applying for this accelerated program.

Advanced Professional Degrees in Law

The Law School program is primarily designed to serve students seeking a first professional degree in American law. Except for international students and participants in the J.D./LL.M. program described above, students are rarely admitted for the purpose of continuing the study of law at the master's or doctoral levels, although the faculty is empowered to authorize such admissions. Applications for such study by American graduates of American law schools are not sought. International students should consult the chapter of this bulletin addressed to them.

Master of Laws (LL.M.). Most international students seek the master's degree, having already been trained in the law of their own countries. To qualify for this degree, the student must successfully complete two semesters of study in residence, and no fewer than twenty-one semester hours with a cumulative grade point average of 2.5. Included in the twenty-one credits of work must be at least two credits of individual written work to be completed either in a seminar or in an independent study course supervised by a faculty member. Many students also take a first-year course. Most foreign students will be expected to enroll in Introduction to American Law, which

provides an overview of several areas of the American legal system and also a two-credit legal writing course, which offers instruction and practice in the kinds of written tasks facing American law practitioners.

The remainder of the academic program is individually selected by the student from the curriculum offerings for first-year and upperclass students. International students attend classes with American students and are graded on the same basis. The degree is granted to students who achieve a grade point average of 2.5. Candidates ordinarily are expected to complete the LL.M. degree in one year.

Doctor of Juridical Science (S.J.D.). Outstanding international students who have earned a degree at the master's level from Duke or a law school of recognized standing, and who have a serious academic interest in law, may be admitted as provisional candidates for the S.J.D. degree. Only international students who have achieved superior academic performance during the master's degree program as well as at their home institutions should apply to the S.J.D. program. Samples of written work, such as completed seminar papers, and a statement of research intentions, should be included with the application. Candidates will usually be asked to complete one or two additional semesters of coursework with a grade point average of at least 3.1, and must pass an examination to test mastery of their chosen field, before being admitted from provisional candidacy to candidacy. The program will ordinarily take from one to three years to complete, depending on the time necessary for research and the production of the doctoral dissertation. It is expected that S.J.D. candidates will conduct original research and make a significant and original contribution to legal scholarship. A committee of the primary faculty supervisor and two additional faculty members will approve a candidates dissertation proposal, assess the progress of the candidate and the research product, and conduct an oral examination upon the candidate's dissertation. Generally, only one or two students gain admission to this program of study each year.

Other Professional Degrees for Lawyers

Advanced degrees may be pursued together with the J.D. degree. Under any approved joint-degree programs, including those described below and those approved on a case-by-case basis by individual application, the Law School recognizes twelve credits from the other degree program toward the J.D. requirements, as long as both are completed simultaneously.

Master of Business Administration. The School of Law and Duke's Fuqua School of Business have established a combined program of study in law and graduate-level business administration. The program provides the opportunity to acquire an education in both law and business administration in four years. Upon satisfactory completion of the required course of study, candidates will be awarded both the M.B.A. and the J.D. degrees.

The student in the M.B.A.-J.D. program may enroll the first year in either the Fuqua School of Business or the School of Law. If the student begins in the Law School, the first-year curriculum is the same as that of other law students; if the student begins in the business school, the first-year curriculum is the same as that of other graduate business students. The student's second year consists of the full first-year program of the other school. In the third and fourth years of the program, the student takes courses in both schools, with about two-thirds of the courses taken in the Law School. Students interested in the health care industry may elect to concentrate their work in the Fuqua School in health administration.

Master of Environmental Management. The School of Law and Duke's Nicholas School of the Environment have established a combined four-year program of studies in law and graduate-level environmental management. The program gives students the opportunity to acquire knowledge about natural resources and environmental science

which is critical in identifying and resolving legal issues with implications for the environment. Upon successful completion of the program, candidates receive both the M.E.M. and J.D. degrees. Students in the J.D./M.E.M. program typically spend the first full year in the Law School and the following year in the Nicholas School. During the remaining two years, candidates can structure an elective program of combined study that meets the requirements of both programs. Students are required to complete 36 credits and a master's project in the Nicholas School. The J.D. degree requires 84 units of credit, 12 of which may be satisfied through work in the Nicholas School.

Master of Public Policy. The School of Law and Duke's Sanford Institute of Public Policy have established a combined four-year program of studies in law and graduate-level policy sciences. The program provides an opportunity for students to acquire decision-making skills and substantive policy knowledge that would be useful in dealing with problems of the public sector. Upon satisfactory completion of the required course of study, candidates will be awarded both the M.P.P. and the J.D. degrees. The combined program requires completion of seven or eight academic semesters and one summer internship. The first year is spent exclusively in the Law School; the second year exclusively in the Institute of Public Policy; and the third and fourth years primarily in the Law School with some coursework in the Sanford Institute. In addition, the student must select a substantive policy area in which to concentrate from among the fields of the administration of justice, communications policy, health policy, and education policy; a summer internship and thesis will be required in the chosen field.

Master of Theological Studies. Students in the joint J.D./M.T.S. program are required to complete a minimum of seventy-two hours in the Law School and a minimum of twelve courses in the Divinity School, and to take all courses required for the two degrees. Persons interested in this joint program must apply separately for admission to each school. Generally students apply simultaneously to both schools. Later applications will be considered, but must be made before the end of a student's first year in either the Law School or the Divinity School.

Doctor of Medicine. The School of Law and the Duke University School of Medicine jointly sponsor a program of combined legal and medical education. The program provides an opportunity to acquire a full basic education in the two fields in six years. Upon satisfactory completion of the required course of study, candidates will be awarded both the J.D. and M.D. degrees.

The student in the M.D.-J.D. program begins the six-year course of study in the School of Medicine. As in the regular M.D. program, the first year is devoted to the basic medical sciences, and the second year to the basic clinical disciplines. After those two years, the student enrolls in the Law School, taking the prescribed first-year courses. A total of seventy-two credits must be earned in the Law School. As electives, the student may select Law School courses that pertain to medical-legal interests. After completing all law requirements, the student returns to the Medical School for elective clinical work tailored to the student's specialized needs. In addition, eighteen semester-hours, or two summer sessions, of elective basic science work are required.

Ph.D. in Political Science. The Law School and the Department of Political Science offer a joint degree program combining a J.D. and a Ph.D. in political science. The coordinated course of study permits some reduction in the required course work for each degree. The program is intended to integrate in a comprehensive, rigorous manner the subject matter and methodology of both disciplines. Study may be undertaken in areas such as American government, political theory, comparative government, and international relations.

The joint program is extremely selective and demanding, requiring about seven years to complete. Only students strongly committed to careers for which holding professional degrees in both disciplines is very important should apply. Graduates of the joint program would be well-positioned to conduct research and to teach either in

law schools or departments of political science or to pursue careers in government, international institutions, or the private sector.

Similar joint J.D./Ph.D. programs may be created with one or more additional departments in the future. Meanwhile, some joint programs can be arranged on an ad hoc basis.

The Secondary Degree in Law

MASTER OF LEGAL STUDIES

Upon favorable recommendation of the faculty, the degree of Master of Legal Studies (M.L.S.) will be conferred upon students who have successfully completed a one-year program of study in the Law School. Students specifically admitted to candidacy for this degree will pursue an individually designed curriculum including both first-year and upperclass courses. In exceptional cases, the degree may also be awarded to J.D. candidates who meet its requirements and who decide not to continue the study of law.

Students will be deemed successfully to have completed a one-year program of study in the Law School if, during a minimum of twenty-eight academic weeks, they have satisfied the following requirements:

1. a passing grade in Law School courses aggregating thirty semester-hours, excluding cross-listed courses, and including at least one course requiring substantial supervised writing, and
2. a grade-point average of at least 2.3 and status in good standing under the rules of the Law School.

M.L.S. candidates generally may not transfer into the J.D. program. Only applicants with a genuine interest in a one-year program of legal studies should apply. Note that the M.L.S. degree does not qualify one to sit for a bar examination or to practice law.

Beyond the Curriculum



Publications

Law and Contemporary Problems. Since 1933, the Law School has published the quarterly, *Law and Contemporary Problems*. The journal is distinctive among professional legal publications in both format and content. Each issue is devoted to papers on a particular topic of contemporary interest. These topics often reflect an interdisciplinary perspective with contributions by lawyers, economists, social scientists, scholars in other disciplines, and public officials. The journal also publishes student notes related to past symposia.

The journal is widely distributed, and its subscribers include general university libraries, governmental agencies, and foreign educational institutions, as well as the more traditional law libraries and law firms. *Law and Contemporary Problems* is monitored by a general editor and a faculty advisory committee.

Twenty-five upperclass law students serve on the editorial staff of this publication. Ten rising second-year students are selected each year on the basis of academic performance during the first year of Law School and demonstrated writing ability in an annual writing competition. Five rising third-year students are selected each year on the basis of academic performance during the first two years of Law School.

Duke Law Journal. The Law School publishes the *Duke Law Journal* six times a year. Edited by students, the journal is among the most prestigious and influential legal publications in the country. Approximately one-third of the contents of each issue consists of student notes dealing with current legal developments; the rest of the issue is devoted to articles and comments by professors and practitioners. Full responsibility for the selection and editing of material is vested in the journal's student editorial board and its elected officers.

Each year one journal issue focuses on topics in administrative law. The journal frequently devotes an issue to a symposium. Recent symposia topics include the frontiers of legal thought, the independence of administrative agencies, and legal responses to changes in corporate structure.

The journal staff of approximately fifty students is chosen on the basis of academic performance in the first year and/or demonstrated writing ability in a writing competition. Students may also seek membership on the journal by submitting a publishable student note.

Alaska Law Review. Since 1983, Duke Law School has published the *Alaska Law Review*. As Alaska has no law school but has the highest number of lawyers per capita of any American state, the Alaska Bar Association contracted with the Law School to provide a professional law journal responsive to the needs of Alaska's diverse legal community. Alaska has a range of cutting edge legal issues in the areas of natural resources law, environmental law, land use planning, economic development, state-federal relations, and Native American rights.

While supervised by a faculty advisory committee and a general editor, student editors have primary responsibility for writing, editing, and managing the *Alaska Law Review*. Twelve rising second-year students are chosen as editors on the basis of excellent first-year grades and/or superlative performance in a writing competition.

Several students may also be selected for membership by submitting a publishable note.

Duke Journal of Comparative & International Law. The *Duke Journal of Comparative & International Law* was established in 1990. The journal, which is published semi-annually, draws on the faculty's academic specialties and on the Law School's J.D./LL.M. in International and Comparative Law degree program. The journal publishes articles from international scholars and practitioners and student notes.

Approximately ten staff members are selected annually on the basis of writing ability demonstrated by the submission of a publishable note or superlative performance in the annual writing competition. Several international students earning the LL.M. degree are also selected each year on the basis of academic record and/or special skills or interests that indicate their likely contribution to the journal.

Duke Journal of Gender Law and Policy. The Law School's newest journal, the *Duke Journal of Gender Law and Policy*, was established in 1994. It is an interdisciplinary publication devoted to discussion of gender issues in the context of law and public policy. The journal encourages works from multiple perspectives, with particular emphasis on practical analysis, in an effort to identify the connections between social science and the law, scholarship and public policy, and academic work and professional practice. Recent issues focus on adoption law and policy, and women in sports.

The journal is staffed by students from the Law School, the Terry Sanford Institute of Public Policy, and the Duke Graduate Program in Women's Studies. To be accepted for membership, students must submit a statement of interest and satisfy the eligibility requirements related to the school in which they are enrolled. The journal is advised by a faculty board whose members are drawn from the faculties of the Law School, the Terry Sanford Institute of Public Policy, and the Women's Studies Program.

Duke Environmental Law and Policy Forum. The Law School began publishing the *Duke Environmental Law & Policy Forum* in 1991. The forum is an interdisciplinary annual magazine which is managed through the Law School but has a strong connection to Duke University's School of the Environment. The forum publishes legal and policy articles from academics and professionals as well as student notes. To fulfill its commitment to both legal and policy analyses of environmental issues, many of the forum's forty or so staff members are joint degree students from the Law School, the Terry Sanford Institute of Public Policy, and the Nicholas School of the Environment.

Recent topics covered in the forum include international environmental norms and assessment requirements, corporate responsibility to reduce solid waste, review of wetlands classifications, an analysis of the Clean Air Act Amendments of 1990, and extraterritorial enforcement under NEPA.

[Information about the publications of the Duke University School of Law is also available at the Law School's World Wide Web site: <http://www.law.duke.edu>.]

Honorary, Professional, and Social Organizations

American Bar Association's Law Student Division. The ABA/LSD allows law students to make contact with the nation's largest professional association for lawyers, the American Bar Association. A small enrollment fee entitles the Law Student Division member to a subscription to the ABA magazine, *Student Lawyer*, to various product discounts, and to information about the ABA's programs and publications on specialized areas of the law. The ABA/LSD also promotes various advocacy and essay contests throughout the school year.

American Civil Liberties Union, Duke Chapter. Newly formed in 1996, the student chapter of the American Civil Liberties Union (ACLU) was formed to further the objectives of the national ACLU and the North Carolina ACLU. The major purpose of the chapter is to advance the cause of civil liberties in North Carolina and at Duke University, including the rights of free speech, free press, free assemblage, equality

before the law, and other civil liberties.

Asian Law Association. The purpose of the Asian Law Association is two-fold. First, it provides an organization where the members of the Law School community may explore issues and engage in activities that are of particular benefit and concern to American students of Asian decent, foreign students from Asia, and other students and alumnae interested in Asia and law. Second, it provides an organization that can enhance the quality and accessibility of Asian law resources at Duke University. Membership is open to the entire student body.

Black Law Students Association. The Law School chapter of BLSA is affiliated with the regional and national BLSA. The aims of the local chapter are to provide a responsive student organization to aid the individual black law student at Duke and to instill a greater awareness of and commitment to the needs of the black community.

Christian Legal Society (CLS). CLS is a nationwide organization dedicated to teaching the members of this nation's legal profession about the vertical dimension of life, without which it is impossible to rightly love and serve our neighbor and to defend the religious freedom for people of all faiths. The Duke chapter is committed to these goals and also is a fellowship of students working to integrate their faith in Christ with their Law School experience and their legal careers. Activities include Bible studies, fellowship events, discussion meetings, public service, and speakers.

Co-Counsel: Pre-Law Advising Program. The purpose of the Pre-Law Advising Program is to provide the Duke University undergraduate community with advice and direction regarding the pursuit of legal studies. The aim of the program is to supplement the pre-law advising mechanisms currently in place at the university by providing pre-law students with access to students currently in law school.

Committee on Gay and Lesbian Legal Issues. COGLLI is an organization open to all students designed to promote the awareness of sexual orientation in society and in the law. The committee seeks to provide a forum for discussion of gay and lesbian issues and to sponsor related events at the Law School. The long term goals are to promote tolerance, open mindedness, and acceptance of sexual diversity both in the legal community and in society at large.

Criminal Law Society. The Criminal Law Society, formed in 1995, is an association of students interested in either prosecution or criminal defense, as well as those who find criminal law issues interesting from a purely academic perspective. The primary goal of the organization is to organize speaking events and professional networking opportunities for students whose career goals center around the practice of criminal law.

Deans' Advisory Council. Members of the Deans' Advisory Council are selected by several deans and administrators of the Law School. Selection for membership reflects the collective judgment that the student is unusually deserving of trust and respect, and manifests traits for which the school would like to be known. The work of the council is to assist the administration of the Law School in its public contacts. Members represent the school in dealing with admissions applicants, placement interviewers, alumni, supporters, and guests. Membership in the organization generally continues after graduation; alumni members continue to assist in the same areas of administrative work. Membership involves a substantial commitment of time and energy to the welfare of the school.

Domestic Violence Advocacy Project. The Domestic Violence Advocacy Project is a volunteer group of Duke law students trained to help battered women in Durham County. From their courthouse office, advocates guide victims through criminal and civil proceedings. Women are first counseled individually by the advocates to gauge their need for social services or for a civil protective order. If there is a criminal case, advocates prepare case summaries for the prosecutor and accompany victims to court.

Drama Society. The Drama Society was founded to provide a nonacademic respite from the day-to-day rigors of law school through theater. The society's purpose is to produce plays in which Duke law students get an opportunity to act, produce, and direct.

Duke Bar Association. The Duke Bar Association coordinates professional, social, and other extracurricular activities of the student body. The association resembles in its composition and purpose both a university student government and a professional bar association. It takes care of student grievances and serves as a mediator between students, faculty, and the administration. The association oversees all student organizations, publicizes Law School activities, sponsors athletic and social programs, and disburses its dues funds among the school's organizations.

Duke Business and Securities Law Association. The DBSLA was founded on 1995 to provide a bridge between the business and law communities at Duke. The mission is to provide a forum for students, faculty, and professionals to explore current issues in various fields of business- and securities-related law. The goal is to facilitate interaction among business and law students and enable each group to benefit from the experiences and insights of the other. The organization seeks to create opportunities for students of Duke's Schools of Business and Law to leverage the resources of the other so they may gain a better understanding of the ways in which their respective fields interrelate. The DBSLA aims also to provide job search assistance to students interested in business-related professions and better enable them to examine a broad range of career pursuits.

Duke Law Film Society. The purpose of the Duke Law Film Society is to educate and entertain the Duke Law community by means of film presentation.

Duke Law Republicans. The Duke Law Republicans work closely with the Durham County Republican Party to assist Republican candidates for state and federal office. The organization arranges for candidates to visit the Law School and meet with students and faculty and assists students in registering to vote in North Carolina.

Duke Project on International Humanitarian Law. Since 1994, this group has provided an opportunity for students to engage in meaningful research related to the International Criminal Tribunal for the former Yugoslavia and for Rwanda. Students are in direct contact with officials from the Office of the Prosecutor for the tribunals and have enjoyed regular opportunities to meet with those officials during their visits to Durham.

Environmental Law Society. The ELS promotes student discussion and awareness of environmental issues by partially sponsoring the annual Cummings Colloquium on Environmental Law, hosting individual speakers and student discussions with lawyers practicing in environmental law, coordinating social and community service events, and sponsoring an annual 5K Fun Run/Walk to benefit a local environmental organization. Its goals are to enhance legal education through the creation of a vital environmental law program at the Law School and to explore summer internships and career opportunities in environmental law in both the public and private sectors. Membership is open to all interested students.

Federalist Society. The Duke chapter of the Federalist Society is a group of conservative and libertarian students interested in the current state of legal order. The society is founded on the principles that the state exists to preserve freedom, that the separation of governmental powers is central to our Constitution, and that it is the province and duty of the judiciary to say what the law is, not what it should be. The society seeks both to promote an awareness of these principles and to further their application through its activities. In the past, the group has hosted distinguished judges and other speakers and has sponsored debates between members of the academic community. Membership is open to interested students.

Graduate and Professional Student Council (GPSC). The GPSC represents students in the business, divinity, environment, graduate, law, medical, and nursing schools. These schools comprise approximately 4,000 students or nearly 40 percent of Duke's student body. GPSC appoints representatives to many university and trustee committees and responds to proposals and reports. GPSC also plans interdepartmental and interschool social events, publishes a monthly newsletter, and conducts an annual survey.

Health Law Society. The Duke Health Law Society is a group of students dedicated to the investigation and discussion of the role of the legal profession in today's health care system. The group works to introduce this important issue to the Law School community by sponsoring lectures and seminars and initiating broad-based dialogue. Membership is open to all students interested in these issues.

Hispanic Law Students Association. HLSA brings together a variety of individuals in order to discuss the issues they will face as Hispanic lawyers in the future, such as: their responsibility as Hispanic lawyers in society, the need for positive role models in Hispanic communities, and the availability of inexpensive/free legal aide. These discussions are usually intermingled with social activities where Hispanics and other law students can experience the richness of the Latin culture. HLSA is also very active in the university Hispanic group MI GENTE, which sponsors SALSA parties and other social events.

Intellectual Property Law Society. Newly formed in 1996, the Intellectual Property Law Society hopes to bring together law students and scientists who are doing cutting edge work in this booming field. Law students may develop a procedure for assisting the scientists with patent applications. The group will also sponsor speakers and panel discussions on patent, trademark, copyright, telecommunications, and other closely related fields.

International Law Society. The International Law Society coordinates law students' professional and academic activities in the area of international law in four ways. First, it sponsors a team to participate in the annual Philip C. Jessup International Moot Court Competition. Second, it organizes an annual Distinguished Speakers Series with lectures focusing on timely issues related to international law. Third, it collects and disseminates information about the study and practice of international law. Fourth, it promotes interaction between foreign and American students at the Law School through brown bag lunches, language tables, and other social activities.

Jewish Law Society. JLS is an organization of law students, faculty, and alumni who share an interest in Jewish legal issues and sociopolitical concerns. The purpose of the organization is to serve as a forum in which beliefs touching upon those concerns may be expressed. JLS sponsors lectures and social events.

The Moot Court Board is composed of second- and third-year students who represent the highest level of oral and appellate advocacy at Duke Law School. Members are selected from the top finishers in intramural moot court competitions held each Spring. Board members represent Duke at tournaments around the country, including events in Washington, DC, New York City, Nashville, and New Orleans, and recently won the Burton Wechsler First Amendment Championship and the Sutherland Cup Competition. Board members also direct the annual Hardt Cup and Dean's Cup Intramural Competitions, as well as the Rabbi Seymour Siegel Moot Court Competition, an intercollegiate competition focusing on ethics.

Parents Attending Law School (PALS) is a social network and support group for male and female law students who have young children. The group assists the admissions office by corresponding with applicants who have questions about child care, schools, and related concerns. PALS also maintains a small study room, equipped with a networked computer, that is available to parents who must bring their children

to the law school occasionally. PALS also sponsors or co-hosts programs pertinent to topics such as "Balancing Career and Family," and holds family-based social activities such as a Holiday Party and an Easter Egg Hunt.

Phi Alpha Delta. Phi Alpha Delta is the largest international organization of lawyers and consists of approximately 150,000 members throughout the world. The purpose of the fraternity is to form a strong bond uniting students and teachers of law with members of the Bench and Bar in a fraternal fellowship designed to advance the ideals of liberty and equal justice under the law, to stimulate excellence in scholarship, to inspire the virtues of compassion and courage, to foster integrity and professional competence, to promote the welfare of its members and to encourage moral, intellectual, and cultural advancement so that each member may enjoy a lifetime of honorable professional and public service. In furtherance of that purpose, the organization sponsors social events and community activities, hosts speakers, and offers financial assistance.

Prisoner Rights Project. The PRP is a volunteer organization of law students. Its goals include educating prisoners about the law and criminal procedure, promoting their rights to humane conditions, and assisting them in preparing postconviction motions. Volunteers answer prisoner questions about court procedure, sentencing classification, privileges, discipline, medical care, and conditions of confinement generally.

Public Hearing. Public Hearing is Duke Law School's co-ed, a capella singing group. The group is dedicated to fostering a sense of community and spirit within the Law School by performing concerts at the Law School and at Law School functions. Public Hearing also provides entertainment for patients in Duke's hospitals and medical facilities.

Public Interest Law Society. A dedicated group of law students who are interested in public service/public sector careers comprise the membership of the Public Interest Law Society (PILS). PILS works with the Office of Career Services to facilitate a wide range of programs and resources on public interest employment. Special projects, such as a comparative study of loan forgiveness programs, are also spearheaded by PILS.

Rape Crisis Project. The goal of the Rape Crisis Project is to assist the Rape Crisis Center of Durham by providing legal research regarding North Carolina case law and statutes, preparing legal information for the benefit of the center's staff, clients, and volunteers, and assisting in other promotional and educational projects.

Sports and Entertainment Law Society. The Sports and Entertainment Law Society was formed in 1989 and sponsors speakers on different aspects relating to legal issues in the sports and entertainment industries.

The Student Funded Fellowship Board is open to any students who are interested in the goals of the organization and who are willing to participate in its activities. The primary purpose of the board is to raise money from students and faculty to fund other students to work in the public interest for a summer. The board is presently expanding its work in hopes of fostering an atmosphere at the Law School more conducive to public interest law. Within the next few years, the board will merge with the School's Public Interest Law Foundation and will add the responsibility of raising and distributing funds for postgraduate public interest jobs.

Volunteer Income Tax Assistance. For many years law student volunteers have provided tax preparation assistance to low-income people in the community. Two or more sites in Durham are staffed by the Law School for eight weeks prior to the tax filing deadline.

Women Law Students Association. The Women Law Students Association provides both a social and professional network for women law students at Duke. WLSA takes an active part in the school's annual Conference on Career Choices and

sponsors frequent speakers and guest presentations. The group has also initiated a mentoring program, which matches students with practicing attorneys in the area, and maintains a statewide network with women's groups at other law schools in North Carolina. WLSA has taken the lead in sponsoring other programs at Duke Law School such as SafeWalks and the Domestic Violence Advocacy Project. Members also teach an undergraduate course on women and the law.

[Information about some of the student organizations at the Duke University School of Law is also available at the Law School's World Wide Web site: <http://www.law.duke.edu>.]

Student Pro Bono Activities

Well over 200 Duke law students each year contribute their time and talents to the community through the Pro Bono Project or student organized group activities. The Pro Bono Project started in 1991 and is headed by the director of public interest and pro bono. Students can select the volunteer placement of their choice from over 100 locations, over thirty subject-matter areas, and a variety of job activities and time commitments. Placements are in all three sectors—private pro bono, government and nonprofit. Student organized or other volunteer programs include the Domestic Violence Advocacy Project, the Prisoner Rights Project, the Brogden (Middle School) Tutoring project, the Duke Bar Association's Community Services Project, Volunteer Income Tax Assistance (VITA), Families of Murder Victims Support Program, the AIDS Wills Project and the Durham County Guardian ad Litem Program. Students receive counseling assistance in the choice of placements.

In 1995-96, placements were available in the following areas: the environment, trial and appellate criminal defense, health access, mental health, economic development, consumer protection, criminal prosecution, child abuse and neglect, child support, migrant law, land loss, education, civil liberties, occupational safety and health, wage and hour enforcement, women's rights, legislative bill drafting, prisoners' legal services, employment law, art and museum law, racial justice, AIDS, cancer prevention, psychiatry, dispute resolution, death penalty research, press freedom and public access issues, state regulation of attorneys, general domestic law, domestic violence prevention, and social security and other government entitlements law.

The Public Interest Luncheon Series supplements the experiential learning of students with an interest in public service. The series includes community speakers who have made a major contribution in some area of public policy; student speakers who have had an interesting public service experience; and a public interest book club. In the spring, students and the director of public interest and pro bono select books to be read over the summer and schedule dates throughout the school year for a discussion of each of these.

Finally, students contribute to the community through their clinic courses and, beginning in the spring of 1994, through the Poverty Law Seminar. Students have represented people at unemployment insurance hearings, at social security disability hearings, at eviction hearings in small claims court, as assistants to attorney representatives of guardian ad litem for children who are alleged to be abused or neglected, and in civil and criminal court generally under North Carolina's certified practice law.

Entertainment and Recreation

Various recreational facilities are available on campus to students. The Bryan Center contains the Reynolds Theater and the Schaefer Laboratory Theater, as well as a film theater, an art gallery, banquet rooms which are available to students at minimal cost, and lounges and patios for student meetings.

Students of the Law School are also entitled to use the university gymnasiums,

tennis courts, swimming pools, golf course, and other facilities. Within a short distance from the campus one may enjoy horseback riding, woodland hiking, and sailing. Other opportunities for physical activity are available in the intramural program, as well as through such activity groups as the outing, sailing, and cycling clubs. North Carolina's mild climate makes most outdoor sports possible during much of the school year. The Appalachian ski slopes are about three and a half hours to the west, the Outer Banks the same distance to the east.

University athletic contests are held on the campus at various times during the academic year. Duke is a member of the Atlantic Coast Conference.

Employment Opportunities

The study of law is demanding. It is designed to occupy the full time of the student and calls for the highest level of concentration. It is unwise for students to dilute their efforts by outside work, especially during the critical first year of study. Accordingly, employment during the first year is strongly discouraged.

For those who find some outside earnings necessary to meet the expense of studying law at Duke and who qualify for the college work/study program under applicable federal regulations, arrangements have been made to provide some part-time employment in the Law School. A number of positions in the law library are filled by law students. Students are often employed in their second and third years as research assistants for faculty members. The university maintains a general placement office to aid in finding employment, and law students may serve as undergraduate residence advisers if they have been at Duke one year or have previously held similar positions.

Employment Limitations. While students should limit their employment for academic reasons, no student may be employed for more than twenty hours per week during the academic year. This twenty-hour limitation is not only a rule of Duke Law School, but is also a requirement of the American Bar Association for the status of a full-time student eligible to graduate in three years.

Law student spouses who seek employment will find opportunities as good here as in most other areas of the country. Laboratory and technical workers, secretaries, computer programmers, technicians, and medical personnel are among the workers most in demand in this area. The university personnel office and the Medical Center personnel office occasionally assist interested persons on locating suitable employment on campus.

Student Life Policies

Students can find useful information on the Law School's World Wide Web site at <http://www.law.duke.edu>. Topics covered include Law School rules and policies, the Student Judicial Code, information on university-wide activities and divisions such as the Student Health Clinic and Counseling and Psychological Services. Also included is the school's policy on accommodating the disabled.



Law Library and Computing Services



The published sources of law, in print and electronic forms, are the basic working materials for both the practicing attorney and the legal scholar. At Duke, law students have ready access to the materials of legal research through the resources of an excellent library collection, networked electronic information sources, and the skills of highly trained library and computing services staff to help them develop research skills to last throughout their professional careers.

Recognizing its place at the center of the Law School community, the Duke Law Library is designed to offer accessible, well-organized collections and services for students. Generous group and individual study areas are located in proximity to the most-used materials, and the library is fully networked to provide desktop access to electronic sources.

The library collection of over 500,000 volumes is a major research collection featuring comprehensive coverage of basic Anglo-American primary source materials, including nearly all reported decisions of federal and state courts, as well as current and retrospective collections of federal and state codes and session laws. Digests, legal encyclopedias, and other indexing devices provide access to the primary documents. Materials subject to heavy student use are available in multiple copies. Extensive collections of records and briefs from the United States Supreme Court, the Fourth Circuit Court of Appeals, and the North Carolina Supreme Court and Court of Appeals are maintained in microform and hard copy. The extensive and continuously expanding collection of legal treatises is organized in the familiar Library of Congress classification system and is indexed in the Duke University public on-line catalogue, which is accessible through the campus network, the World Wide Web, and through dial-in from outside the campus. Special treatise collections are maintained in several areas, including the George C. Christie collection in jurisprudence and the Floyd S. Riddick collection of autographed senatorial material.

The periodical collection includes extensive runs of all major legal research journals, bar association publications, institute proceedings, and newsletters. The library is a depository for United States government publications, with concentration on congressional and administrative law materials. Hard copy document holdings are

supplemented by an extensive microform collection, which includes complete runs of the Congressional Record and the Federal Register, all post-1970 congressional materials, congressional committee prints dating back to the mid-nineteenth century, and a number of special subject collections. In addition, law students have access to the documents collection of the main campus library. Important state government documents are collected in both hard copy and microform.

In addition to its Anglo-American holdings, the library holds substantial research collections in foreign and international law. The foreign law collection is extensive in coverage, with concentrations in Canadian, other commonwealth, and European law and business law materials. Growing collections in Asian law are being developed. The international law collection is strong in primary source and treatise material on both private and public international law topics, and is supplemented by collections held at the main library.

The Duke University Libraries (Perkins, Law, Business, and Medical) together contain one of the major research collections in the country, holding over 4,000,000 volumes. Law students have access and borrowing privileges at other libraries in the Duke system and those at local universities. To obtain materials not available locally, the law library staff uses a variety of electronic networks to retrieve information from libraries and other sources throughout the country. Cooperation with other libraries, both on and off campus, ensures that materials are available when needed for the Law School community.

The success of a law school library depends as much on the quality of the services it provides as on the strengths of its collection. At Duke, the library staff includes ten librarians with graduate degrees, five of whom hold additional degrees in law. The manager of computing services also holds a degree in law and library science. The law-trained staff members serve as instructors in the first-year research and writing program and regularly offer seminars in topics of advanced legal research. They also provide instruction in effective use of the school's computer network and applications. The staff produces a series of research guides, a newsletter, and various current-awareness services, which has been honored with the American Association of Law Libraries' Law Library Publications Award. It also maintains bibliographies of books and articles by Law School faculty members. Services are also available through the library's World-Wide-Web home page. The library publications have been honored with the American Association of Law Libraries' Law Library Publications Award. Information about library services is also published on the library's World Wide Web home page <http://library.law.duke.edu>.

The library features nearly 300 individual study carrels, nearly all of which are wired for connections to the Student Research Network. Eighty-five carrels equipped with networked computer terminals and an additional twenty terminals are available for students in group study rooms and in the computer instruction room. The Student Research Network is designed to provide a workstation environment where law students can access and work with electronic and print information sources, create legal writing documents, and print them. The network provides shared access to word-processing software (WordPerfect and MS Word), legal research and other commercial on-line databases (Lexis, Westlaw, Dialog, etc.), electronic mail, the World Wide Web and other resources of the Internet, the university on-line catalog, and locally mounted databases. Duke faculty make increasing use of the network to distribute information to students and for course-related e-mail discussion groups, and are actively engaged in developing other productive uses of network technologies to supplement in-class instruction. The library is a member of the Computer Assisted Legal Instruction consortium (CALI), and makes CALI exercises freely available to students in support of the Law School curriculum.

Because of the growing reliance on computing and network technologies, all entering students in the JD program are required to own computers capable of accessing

the law school network via dial-in from their residences. Computing Services staff offer advice to students about computer purchases and assist law students in making productive use of computers an integral part of their law school experience.

The staff of the Law Library in 1997-98 includes:

Richard A. Danner, B.A., M.S., J.D., *Associate Dean for Library and Computing Services and Research Professor of Law*

Mark P. Bernstein, B.A., J.D., M.L.S., *Associate Director of the Law Library and Senior Lecturing Fellow*

Hope E. Breeze, B.A., M.L.S., *Head of Technical Services*

Janeen J. Denson, A.B., M.S.L.S., *Head of Collection Management*

Melanie J. Dunshee, B.A., J.D., A.M.L.S., *Reference Librarian and Senior Lecturing Fellow*

Doris M. Hinson, B.A., M.L.S., *Cataloger*

Janet Sinder, A.B., J.D., M.S., *Head of Information Services and Senior Lecturing Fellow*

Cathy Surles, B.A., M.L.S., J.D., *Reference Librarian*

Katherine Topulos, B.A., M.A., M.S., J.D., *Reference Librarian and Lecturing Fellow*

Gretchen Wolf, B.S., M.S., *Acquisitions Librarian*

The Computing Services staff includes:

Kenneth J. Hirsh, B.A., J.D., M.L.S., *Manager of Computing Service and Senior Lecturing Fellow*

Becky A. Mangum, B.S., *Assistant LAN Manager*

Alonzo A. Felder, B.S., *Faculty Support Data Processing Specialist*

International Students



International Law Study at Duke

Duke Law School welcomes international students from countries throughout the world to all its programs of study. The presence of students from a wide variety of cultures and legal systems greatly enhances the education of all Duke Law School students. Highly qualified foreign law university graduates who seek exposure to the American legal system and the legal profession are encouraged to apply to one of the following degree programs. Information about international law study at Duke University School of Law is also available at the Law School's World Wide Web site: <http://www.law.duke.edu>.

Degree Programs for International Students

Juris Doctor (J.D.). International students with excellent academic qualifications and English proficiency may seek admission to pursue the J.D. and joint degree programs. Applicants should recognize that they will enter a program designed for extremely capable professional students who already possess a substantial background in American culture and familiarity with the American educational system. The burdens of a new educational system in a wholly new environment are especially demanding for students who have not previously studied in the United States.

International applicants whose first language is not English must present a high score on the Test of English as a Foreign Language (TOEFL). Applicants who already hold a university-level degree from an English medium institution may, however, inquire about exemption from this requirement. All J.D. applicants are required to take the Law School Admission Test (LSAT). Candidates who have earned professional law degrees in countries with a legal system not dissimilar to that found in the United States may be able to receive credit for as much as one-third of the course work required for the completion of the J.D. degree. Students who have completed the LL.M. degree in the United States may also apply to the J.D. program; in some cases, they may be able to complete the J.D. degree in fewer than three years. All inquiries about the J.D. program should be directed to the Law School Office of Admissions, which oversees admissions to this program. International students will be required to provide proof of financial support.

Master of Laws (LL.M.). The Duke LL.M. degree program is designed for graduates of non-American law schools. The LL.M. program typically enrolls about fifty students from as many as twenty-five different countries. Participants in the LL.M. program will include practicing lawyers; judges; faculty members; prosecutors; staff members from ministries, banks and corporations; and a small number of outstanding recent law graduates.

The LL.M. degree requires two semesters of study in residence at Duke and a minimum of twenty-one semester hours of course work. Students may elect to take one first-year course, which will bring them into contact with entering American J.D. students who are facing similar academic challenges for the first time. LL.M. students are asked to enroll in a seminar or in an independent study course with a faculty member, the end product of both being the submission of a substantial piece of written work by the student. LL.M. students as a group undertake a one-credit Introduction to American Law course. The course is taught by members of the Law School faculty and provides insight into distinctive aspects of American law. The course also provides the opportunity to visit North Carolina and Durham courts as well as the Supreme Court of the United States. A two-credit legal research and writing course is required of LL.M. students who do not have a strong common law background. The course prepares students for the kinds of writing responsibilities expected of qualified American law practitioners. All LL.M. students will receive orientation to the Law Library and the computer system. Other courses are individually selected by the student with the guidance of a faculty advisor. LL.M. students participate in classes with J.D. students and the same grading scale is applied. International students whose first language is not English are given extra time on final examinations, however. Students are expected to complete the degree in one year unless special alternative arrangements are made.

Doctor of Juridical Science (S.J.D.). International students who have already earned a degree in American law at the master's level may apply for admission to the S.J.D. program. Admission is extremely selective, and students should apply only if they have achieved exceptional academic records at both their home and their American institutions. S.J.D. candidates are expected to be able to demonstrate that they have the capacity to conduct original research and to produce a thesis which will be a significant contribution to legal scholarship. Applicants should submit transcripts from all previous academic institutions at which they have studied; references from at least two faculty members very familiar with the applicant's credentials, including one from a faculty member acquainted with the applicant's studies in the United States; a sample of written work; and a preliminary thesis proposal. Students admitted to the S.J.D. program will usually be asked to complete one to two semesters of course work at Duke before undertaking the thesis component of the degree. The student's research and thesis will be supervised by a faculty member highly qualified in that area of law and by two additional faculty members in the same or related fields. Prior to the thesis project, the candidate will sit for oral examinations and fulfill requirements recommended by faculty sitting on the Graduate Studies Committee. The S.J.D. normally involves a minimum of two to three years. It should be noted that very few students gain admission to this program of study.

Admission of International Students

An admissions process separate from the J.D. admissions is maintained for foreign students applying to the LL.M. or S.J.D. programs. Prospective applicants should write for forms and information to Ms. Judith Horowitz, Associate Dean for International Studies. An application fee of \$65 is charged and should accompany the application. Students from countries where English is not the principal language are required to present a high score on the Test of English as a Foreign Language (TOEFL), which is administered by the Educational Testing Service of Princeton, New Jersey. For further

information, appropriate officials at the student's university should be consulted.

Applications and supporting material should reach Duke by February 15. Students who sit for the TOEFL later than January are advised that it may take up to two months for examination results to reach Duke. Late TOEFL scores and other application materials can seriously delay or even jeopardize admissions decisions. Applicants will be notified of acceptance beginning in late February. Admissions decisions will continue until the LL.M. class is full. It is greatly to the applicant's advantage to apply early. Admission is for the fall semester only. A deposit fee of \$500 will be required to confirm acceptance of a position at the Law School.

Financial Aid

Duke offers limited financial assistance to international students. All non-U.S. citizens will need to provide proof of sufficient financial support for tuition and living expenses for the degree program before the university initiates the student visa process. Foreign students admitted to the J.D. program must have funds available for all three years of study. The Law School does not award new scholarship funds on the basis of need or merit once the student matriculates.

Housing

Duke University maintains a limited number of furnished apartments in which international students may reside. In addition to Duke University housing, there is an abundance of well-appointed, reasonably priced housing in the area. Compared to most urban areas, the cost of living and quality of life in Durham are very good. It is beneficial to have a car, however, since public transportation is not readily available.

Placement with American Law Firms

International students sometimes find that they would like to complete their legal education with an internship at an American law firm. Students are welcome to use the services of the Law School Office of Career Services. The office sponsors special sessions for international students in order to explain the placement process, to help with writing resumes and with interview techniques, and to offer other kinds of assistance as necessary. The Office of Career Services will assist whenever it is possible in scheduling interviews. Students from Duke participate in an annual job fair held at New York University at which law firms from the U.S. and abroad interview job applicants. The visa office at Duke helps students obtain permission to engage in a period of practical training. The Law School cannot, of course, guarantee that students will have success in locating a position with an American law firm. International students are advised to make contact with American Law firms, if possible, before they leave their home countries. Students who have the benefit of at least two years of legal experience before they pursue the LL.M. degree are often the most successful in identifying positions with American law firms. Information about taking state bar examinations is also available in the Office of Career Services.

Special Features of Duke for International Students

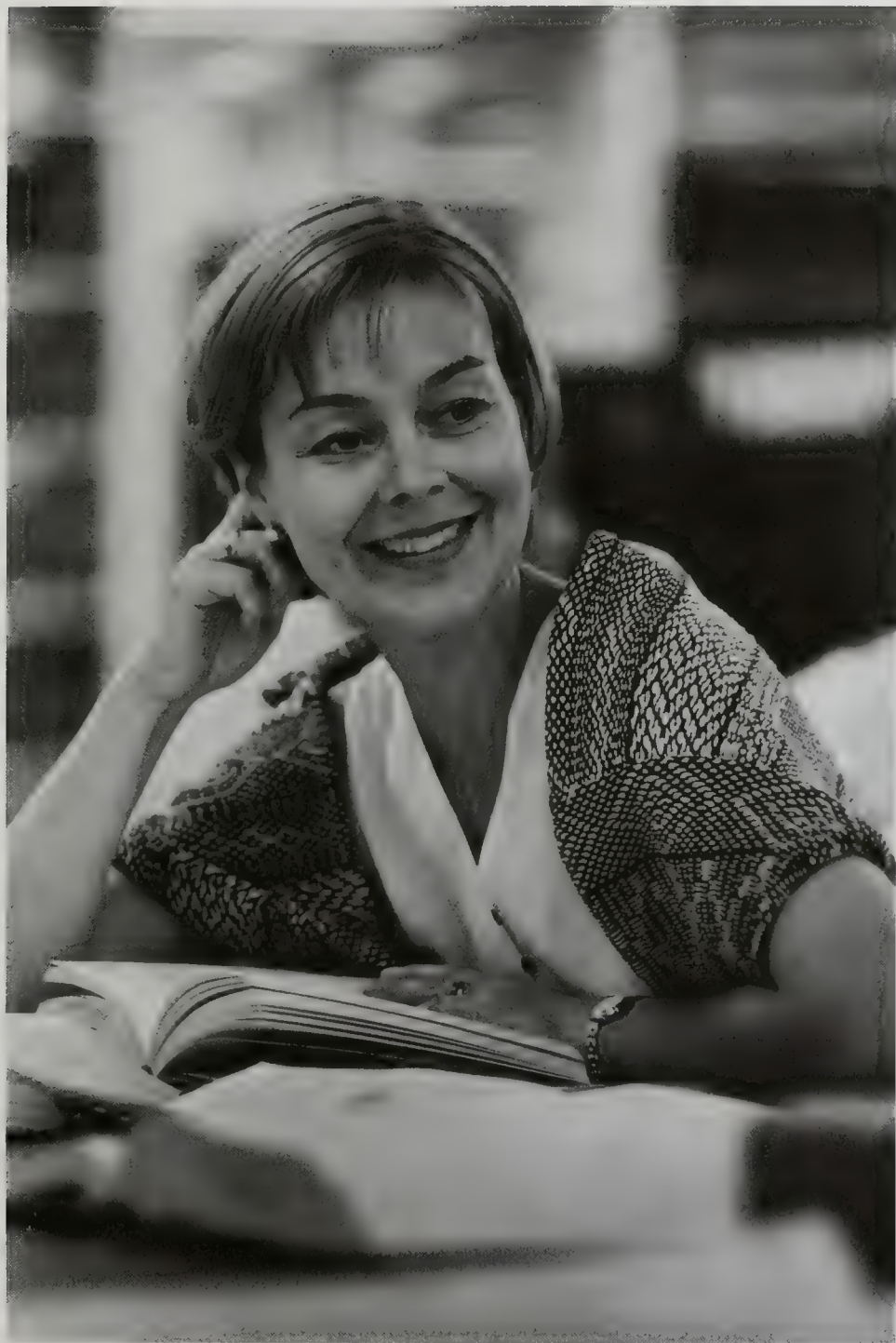
The size of the international student body at the Law School is large enough to make its presence felt at the school, but not so large as to be a totally separate entity. All international students are supported in their efforts to become an integral part of the Duke community. To this end, the university's International House sponsors orientation sessions, offers the opportunity for foreign students to elect to have a host family in Durham, and provides a number of special programs and services throughout the year. Duke Law School also conducts a several-day orientation for all new students and several separate sessions designated specifically for international student concerns.

New international students at the Law School are assigned to upper-class students who act as big sisters or brothers. International students are selected as representatives to the Duke Bar Association and the Deans' Advisory Council. All clubs and associations, but especially the International Law Society, encourage the participation of international students. The *Duke Journal of Comparative & International Law* provides opportunities for international students to submit articles and for as many as five LL.M. students to participate as staff members in the production of the journal.

Duke Law School has an associate dean whose office is responsible for the admission of international applicants, orientation, academic and adaptation counseling, and other services for international students. Each LL.M. student is assigned to a faculty adviser who offers guidance with course selection. The legal research and writing course is carefully structured in order to familiarize students with the law library, with legal writing techniques of a gradually more demanding nature, and with the skills necessary for a beginning associate to function effectively in a law office. The introduction to American law course provides an overview of various areas of American law, of the legal profession, and of the judicial process. The goal of the LL.M. program is to provide international students with the most complete exposure to American law and culture that can be accomplished in one academic year.

All international students are welcome to attend the Law School's summer residential institutes. The Duke-Geneva Institute in Transnational Law is held during the month of July. The institute is co-sponsored by the University of Geneva Law Faculty in Geneva, Switzerland. The Institute takes advantage of many international institutions located in Geneva to arrange for special sessions with highly-placed officials at those institutions. Courses are taught in English by both American (usually Duke) and non-American faculty, and LL.M. students enrolled at Duke may be able to earn up to six credits toward their degree. One course provides an introduction to the American judicial system. The Institute enrolls about seventy students from Duke and other American law schools as well as students and law graduates from law schools throughout the world.

A very similar institute, with a strong Asian and financial institutions emphasis, is conducted in Hong Kong with the University of Hong Kong law faculty during the month of July. The Asia-America Institute in Transnational Law enrolls sixty to seventy students from many different countries. Participants in the institute typically include judges, lawyers, students, faculty members and government officials. The largest groups of participants have come from the United States and Hong Kong, but other countries have included Bulgaria, Mongolia, Japan, France, Germany, Taiwan, Kyrgyzstan, the Philippines, Portugal, China, and Thailand. Brochures describing both institutes can be obtained from Duke University Law School.



Career Services



Career Services

The many advantages of attending a small, highly-regarded, national law school like Duke certainly extend to the area of career services and placement. In fact, Duke Law School offers one of the most successful career services and employment records among all American law schools. For example, in a relatively tight job market, members of the recent class of 1996 reported ninety-eight percent employment six months after graduation, a figure topped by only one U.S. law school. We have every expectation that subsequent graduating classes of Duke Law School will enjoy similar results.

Duke Law School graduates find employment in all sectors of the legal profession. The class of 1996 presents a typical profile. Seventy-one percent of its graduates are presently employed across the United States in private law firms. Fourteen percent have taken prestigious clerkships with federal and state court judges. The remaining members of the class are employed by government agencies, public interest organizations, military JAG offices and public corporations.

The geographical destinations of our graduates are equally diverse. While a significant majority of our students take jobs in the eastern one-half of the United States, Duke Law School has over 6,400 alumni presently practicing law in all fifty states. This broad alumni base supports our students' networking efforts when involved in a job search.

Second-year law students at Duke experience similar success in the employment market. Through our fall On Campus Interview program, over seventy-five percent of the second-year class find summer clerkships in law firms throughout the United States at salaries which typically range between \$1,000 and \$1,500 per week. This past fall, over 330 legal employers from across the country visited Duke Law School to recruit from a pool of fewer than 190 law students. This extremely favorable employer/student ratio is one of the very best in the United States. The remaining members of the class will locate summer jobs through other means, often by working with our national Law School Alumni Network. Last year, the second-year class achieved a ninety-nine percent summer employment result.



Although first-year law students typically face a more difficult job market, Duke's first-years enjoy a relatively successful summer job search experience. Over ninety percent of these students locate summer clerkships with law firms, federal agencies, judges, and public interest organizations. Several find jobs as a result of Duke's February On-Campus Interview program for first-year students. Some students find summer jobs clerking with legal employers in Europe and Asia in connection with Duke Law's summer programs in Geneva and Hong Kong.

The success of our nationally prominent placement program is a function of several factors, the most obvious being the extremely high caliber of individuals who attend Duke Law School. But also of significance is the level of hands-on, career-related support provided by the Law School's Office of Career Services to Duke Law students. Because of Duke Law School's relatively small size, students receive a significant amount of one-on-one counseling and preparedness training from our professional staff. Our goal in the Office of Career Services is to ensure that Duke Law students are as informed and prepared as possible as they enter a very competitive job market. We also strive to provide potential legal employers with information describing the qualities and capabilities of Duke Law students, thereby guaranteeing a high demand for a relatively small supply of Duke Law School talent.

In furtherance of ensuring well-prepared and informed law students, the Office of Career Services at Duke Law School hosts a variety of programs throughout the academic year aimed at increasing law students' job search skills and information base. Communications and interview skills, resumes and cover letters, and self-assessment techniques are some of the areas covered in our career development workshops. Additionally, practicing attorneys from across the country regularly visit Duke Law School to participate in panel discussions and seminars aimed at increasing student awareness of both available areas of legal practice as well as issues facing student law clerks and new lawyers. This office also maintains a state of the art on-line computer research capability which law students utilize for the most up to the minute information about the legal employment market.

Below are placement statistics for the three most recent graduating classes:

	1994	1995	1996
Inquiries Received	512	533	545
Interviews on Campus	281	325	332
Employers' Geographical Distribution			
Northeast	44%	44%	45%
Southeast	36%	35%	34%
Midwest	12%	13%	12%
West	8%	8%	9%
Student Information			
Graduates Reporting Employment			
Six Months After Graduation	97%	98%	98%
Employers' Geographical Distribution			
Northeast	39%	34%	40%
Southeast	38%	44%	36%
Midwest	11%	12%	9%
West	12%	10%	15%
Type of Employment			
Private Firms	64%	68%	71%
Business/Corporations	3%	3%	8%
Government and Public Interest	3%	4%	5%
Judicial Clerkships	28%	24%	14%
Teaching/Advanced Study	3%	1%	2%

[Information about career services at the Duke University School of Law is also available at the Law School's World Wide Web site: <http://www.law.duke.edu>.]

Alumni Affairs



Alumni Relations

Though Duke Law School graduates are dispersed across the country and throughout the world, their relationship with the Law School remains close. The Duke Law School External Relations Office, working with the Duke Law Alumni Association, links the school's alumni with the Law School and with each other. Information about alumni programs sponsored by the Law School is also available at the Law School's World Wide Web site: <http://www.law.duke.edu>.

Law Alumni Association. Every alumnus/a of the Law School is a member of the Law Alumni Association. The Law Alumni Association Board of Directors, its governing body, consists of approximately thirty members, who serve three-year rotating terms.

Reunions and Law Alumni Weekend. The Law School External Relations Office organizes reunions by class at five-year intervals. The reunions are held in the spring on Law Alumni Weekend. A reunion chairperson from each class is responsible for helping to plan reunion activities and encouraging classmates to attend. At the 50th reunion, alumni are inducted into the Half-Century Club.

Public Service Awards. In 1985, the Law Alumni Association Board established the Charles S. Murphy Award to be presented during Law Alumni Weekend to an alumnus or alumna whose devotion to the common welfare is manifested in public or quasi-public service or in dedication to education. Charles S. Murphy, a North Carolina native, devoted himself to public service, serving in the administrations of Truman, Kennedy, and Johnson as well as serving as a Duke trustee and member of the Law School Board of Visitors. In 1994, the Law Alumni Association Board established the Charles S. Rhyne Award to honor an alumnus or alumna whose career has been devoted to private practice but who has also made significant contributions to public service.

Alumni Publications. The *Duke Magazine*, an award-winning alumni publication which provides news and features about University programs, faculty research, student life, and alumni activities is published for all Duke alumni. Through the magazine, alumni are informed about each other, campus changes, and issues affecting higher education generally and Duke specifically.

The Law School External Relations Office publishes the *Duke Law Magazine* twice yearly. It is sent to all Duke Law alumni and other members of the Law School community including students. Through the magazine alumni are informed of faculty work on important legal issues and programs at the Law School. An alumni section

includes an alumni notes feature through which alumni can keep each other informed of milestones in their professional and personal lives. It also includes articles on different segments of our alumni body and profiles of some interesting individuals.

The Law School External Relations Office also publishes a *Law School Annual Report* for the Law School at the end of each fiscal year, which is sent to all law alumni and others in the Law School community. It includes reports from all offices and departments of the Law School and is an excellent way to bring everyone up to date regarding the Law School.

Local Associations. The Law School External Relations Office coordinates and supports the activities of local law alumni associations. The purpose of the local association program is to establish and maintain a sense of community and identity with the Law School and among our alumni. We also hope to increase alumni awareness of the progress and needs of the school. These objectives are pursued through social and educational events for alumni which are attended by a Law School representative.

Besides serving a social and networking function for local alumni and encouraging a sense of community, these groups also provide some practical assistance to the Admissions and Career Services Offices of the Law School.

International Alumni Programs. The Law School also pursues a strong alumni relations program with our growing international alumni body. The Law School External Relations Office sponsors programs for current international students to explain alumni and development programs. There are many local associations outside the United States including Tokyo, Taiwan, and several in Europe. Alumni events are held each year in conjunction with the transnational institutes in Asia and in Europe, as well as an International Alumni conference.

Alumni Programs for Students. In response to both student and alumni interest, the Law Alumni Association sponsors a series of panel discussions featuring alumni in various legal fields. This program is composed of panels of alumni invited to the Law School to discuss timely issues in the legal community such as law firm delivery of pro bono service and the changing nature of legal practice. The Braxton Craven Inn of Court, a professional organization of attorneys, judges and students that holds regular meetings with educational programs, includes second and third year students each year providing valuable educational and networking opportunities.

In addition to coordinating these events, the Law School External Relations Office is involved with students and student organizations throughout their Law School careers, and, in fact, ushers them into alumni status by coordinating the Law School activities for Graduation Weekend. Students are invited to attend all alumni events at the school and make a significant contribution to the Annual Fund Campaign as volunteers during the annual telethons. The Law School External Relations Office is also available to individual students and to student organizations who wish to contact alumni.

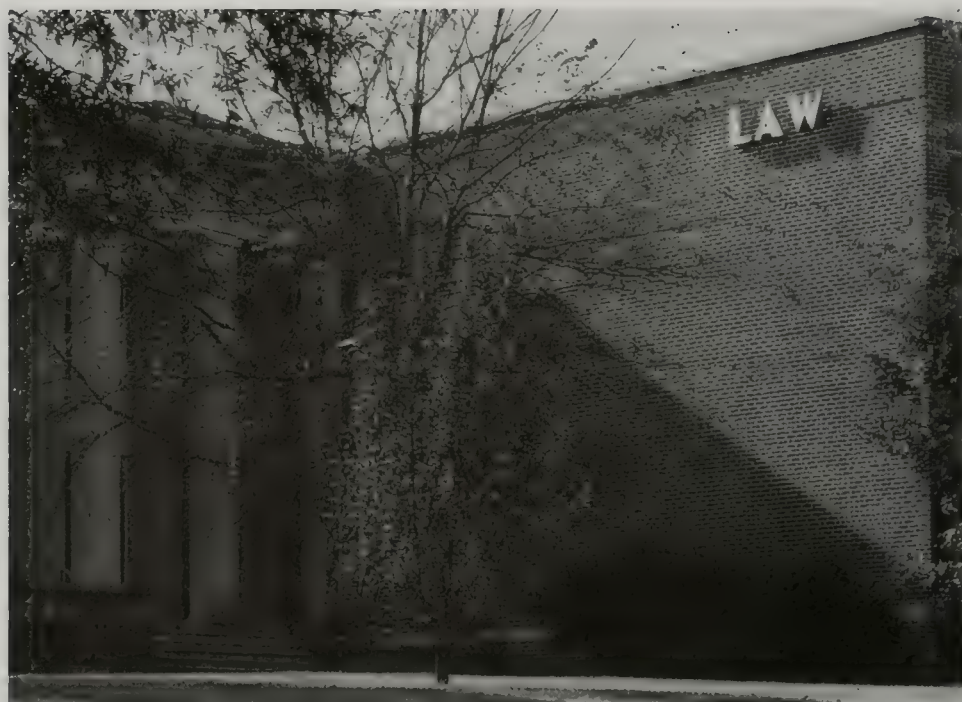
Alumni Admissions Interviewing Program. In 1985, the Law School began a program which invites alumni to help in the application and admissions process. The program, which is administered by the Law School Admissions Office, involves alumni in recruiting and communicating with prospective students.

Annual Fund Campaign. Gifts made by alumni and other friends of the Law School to the Duke Law School Annual Fund provide flexible financial support to the school. These funds undergird the operating budget and pay for items that endowment funds, often designated for specific purposes, do not address and that tuition revenues fall short of covering. Duke Law alumni are very responsive to the Annual Fund Campaign.

Appendix A

UNDERGRADUATE INSTITUTIONS REPRESENTED IN THE 1996 ENTERING CLASS

Albion College	1	Texas A&M University	3
American University	1	Transylvania University	1
Anderson University	1	Tufts University	1
Arizona State University	1	Tulane University	3
Berklee College of Music	1	United States Naval Academy	1
Boston University	2	University of California-Berkeley	2
Bowdoin College	1	University of California-Los Angeles	1
Bradley University	1	University of California-San Diego	2
Brigham Young University	5	University of Central Florida	1
Brown University	2	University of Chicago	4
Bucknell University	1	University of Colorado-Boulder	2
Calvin College	1	University of Dayton	2
Case Western Reserve University	1	University of Florida	3
Central College of Iowa	1	University of Georgia-Athens	2
Colgate University	1	University of Houston	1
College of St. Gallen	1	University of Illinois	2
College of William & Mary	2	University of Miami	1
Columbia University	2	University of Michigan-Ann Arbor	4
Cornell University	6	University of Minnesota	1
Dartmouth College	2	University of Missouri	1
Davidson College	1	University of Nebraska	1
Drury College	1	University of North Carolina-Chapel Hill	5
Duke University	18	University of Notre Dame	6
Earlham College	1	University of Oregon	1
Emory University	5	University of Pennsylvania	3
Fordham University	1	University of Portland	1
Georgetown University	3	University of Puget Sound	1
Georgia Institute of Technology	1	University of South Carolina	1
Gustavus Adolphus College	1	University of Southern California	1
Hamilton College	2	University of Texas-Arlington	1
Hampshire College	1	University of Texas- Austin	2
Harvard University	8	University of Utah	1
Haverford College	2	University of Virginia	3
Houghton College	1	University of Washington	2
Howard University	1	University of Wisconsin-Madison	1
Hunter College - CUNY	1	Utah State University	1
Indiana University	1	Vanderbilt University	2
Johns Hopkins University	3	Virginia Polytechnic University	1
Keio University	1	Wake Forest University	2
Kentucky State University	1	Washington University at St. Louis	4
Loyola College, MD	1	Wesleyan University	2
Miami University, Ohio	1	Yale University	4
Michigan State University	1		
Middlebury College	1		
Morehouse College	1		
Northwestern College, WI	1		
Northwestern University	4		
Oberlin College	1		
Pennsylvania State University	1		
Pomona College	2		
Princeton University	2		
Rice University	4		
Rutgers University	1		
St. Mary's College, MD	1		
Siena College	1		
Stanford University	2		
SUNY Buffalo	1		
SW University of Economics & Finance	1		



Appendix B

STATES REPRESENTED IN THE 1996 ENTERING CLASS

Alabama	1
Alaska	2
Arizona	2
California	15
Colorado	3
Connecticut	3
Delaware	1
Florida	8
Georgia	8
Idaho	1
Illinois	6
Indiana	1
Iowa	2
Kansas	2
Kentucky	3
Louisiana	2
Maine	1
Maryland	13
Massachusetts	5
Michigan	3
Minnesota	2
Mississippi	1
Missouri	2
Nevada	1
New Hampshire	2
New Jersey	6
New York	16
North Carolina	17

Ohio	11
Oregon	1
Pennsylvania	2
South Carolina	6
Texas	12
Utah	5
Virginia	9
Washington	4
Wisconsin	6
Wyoming	1

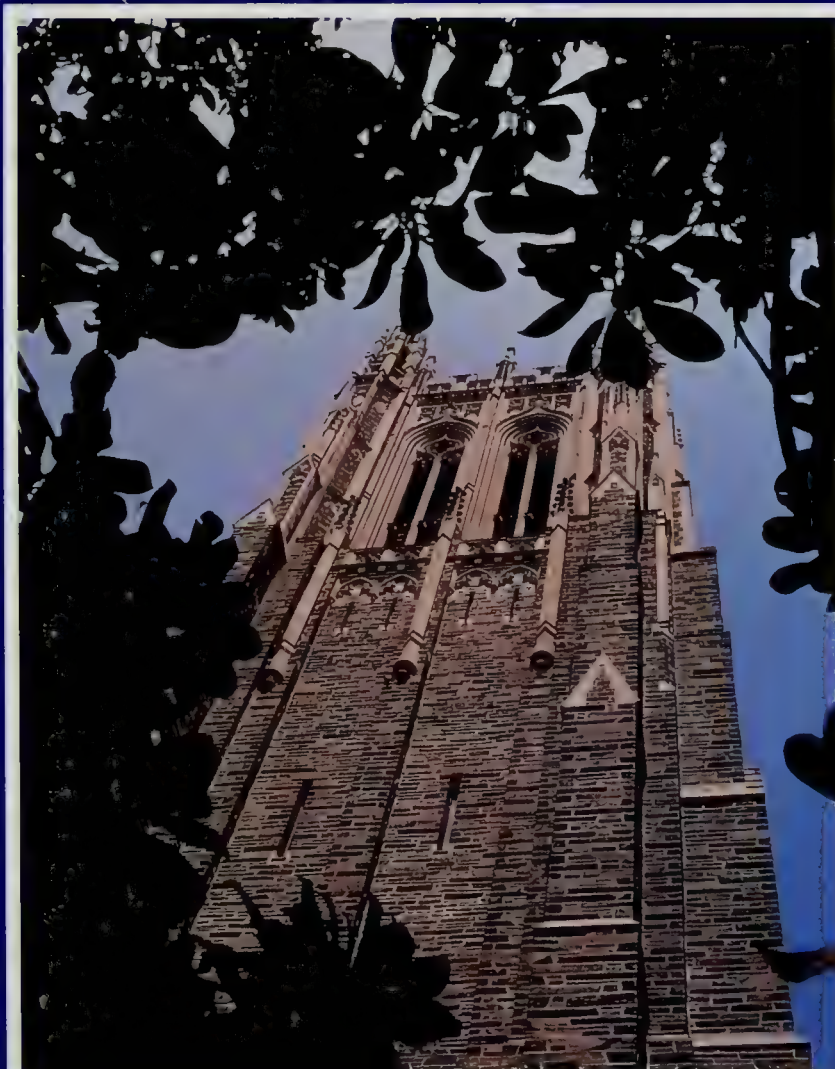
FOREIGN COUNTRIES REPRESENTED

China	1
India	1
Indonesia	1
Japan	1
Switzerland	1
Taiwan	1
United Kingdom	1

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Duke University
Durham, North Carolina 27708

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bulletin of
Duke University
Summer Session
1997



The Mission of Duke University

The founding Indenture of Duke University directed the members of the university to "develop our resources, increase our wisdom, and promote human happiness."

To these ends, the mission of Duke University is to provide a superior liberal education to undergraduate students, attending not only to their intellectual growth but also to their development as adults committed to high ethical standards and full participation as leaders in their communities; to prepare future members of the learned professions for lives of skilled and ethical service by providing excellent graduate and professional education; to advance the frontiers of knowledge and contribute boldly to the international community of scholarship; to foster health and well-being through medical research and patient care; and to promote a sincere spirit of tolerance, a sense of the obligations and rewards of citizenship, and a commitment to learning, freedom, and truth.

By pursuing these objectives with vision and integrity, Duke University seeks to engage the mind, elevate the spirit, and stimulate the best effort of all who are associated with the university; to contribute in diverse ways to the local community, the state, the nation, and the world; and to attain and maintain a place of real leadership in all that we do.

Term I
May 22 - July 3

Term II
July 7 - August 16

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Office of Continuing Education and Summer Session

Box 90059, or The Bishop's House, Rm. 201

Duke University

Durham, North Carolina 27708-0059

Tel. (919) 684-2621

FAX: (919) 681-8235

e-mail address: summer@acpub.duke.edu

web site: <http://www.learnmore.duke.edu>

Welcome to Summer Session 1997!

Summer Session provides an educational and residential experience quite different from that of fall or spring semester at Duke. Classes are smaller as a rule than in the academic year, and you have the opportunity to interact more closely with professors and peers. Central Campus Apartments afford a degree of independence that many students find a welcome change from dorm life. Summer is the time to concentrate on one or two classes; to cheer for the Durham Bulls; to raft down the Eno River; to learn how to cook; to find the night spots in Durham and Chapel Hill; to get to know Duke and environs in new ways.

If you are now, or have been, a student in good standing at an accredited institution of higher learning, and want undergraduate or graduate courses for academic, professional, or personal enrichment, then you are eligible to enroll in summer courses at Duke. High school graduates accepted at accredited institutions are also invited to register.

The pages that follow will give you the information you need to make your summer plans at Duke University. For further information not provided in this bulletin about programs, admissions, registration, regulations, course descriptions, financial aid, and policies, please consult the appropriate current Duke University bulletin or call us at the Summer Session office, (919) 684-2621, or e-mail summer@acpub.duke.edu.



Calendar

April

2 Wednesday Registration begins for Term I and/or Term II.

May

13 Tuesday Beginning this day, Duke students must see their dean or director of graduate studies if telephone registration is denied.

22 Thursday Term I classes begin.

26 Monday Drop/Add for Term I ends at approximately 10:00 p.m. Duke students use ACES; non-Duke students call 684-2621 and leave your name, social security number, drop/add information.

June

18 Tuesday Last day to withdraw *W/P* or *W/F* from Term I courses for compelling reasons.

30 Monday Term I classes end.

July

1 Tuesday Reading Period, Term I.

2 Wednesday Term I final examinations begin.* (See page 37 for examination schedule.)

3 Thursday Term I final examinations end.*

7 Monday Term II classes begin.

9 Wednesday Drop/Add for Term II ends at approximately 10:00 p.m. Duke students use ACES; non-Duke students call 684-2621 and leave your name, social security number, drop/add information.

August

1 Friday Last day to withdraw *W/P* or *W/F* from Term II courses for compelling reasons.

13 Wednesday Term II classes end.

14 Thursday Reading Period.

15 Friday Term II final examinations begin*. (See page 37 for examination schedule.)

16 Saturday Term II final examinations end.*

*Any deviation from the examination schedule must be approved by the director of the Summer Session.



"Summer course work is much more effective due to the degree of intense focus required of students and professors."

(Jennifer Newbern, Summer '96)

Registration

Incoming Duke Frosh. Incoming Duke first-year students are permitted to attend Summer Session. However, as ACES PIN numbers will not have been assigned, incoming first-year students must register via the registration form attached in the center of this bulletin. Registration changes must be done through the Summer Session Office.

Duke Students. Duke students must register using ACES, the Automated Computer Enrollment System. However, there are several exceptions: graduating seniors must register using the registration form in this bulletin; students desiring study abroad (see Study Abroad section on page 30) must register through the Office of Foreign Academic Programs (919) 684-2174; students desiring Marine Lab courses (see Marine Lab section on page 18) must register through the Duke University Nicholas School of the Environment, Marine Lab (919) 504-7502. Graduate and undergraduate students who plan to enroll for courses, research (graded or ungraded), or graduate continuation fee only in one or more terms of the 1997 Summer Session are urged to have their course programs approved by their respective schools or colleges.

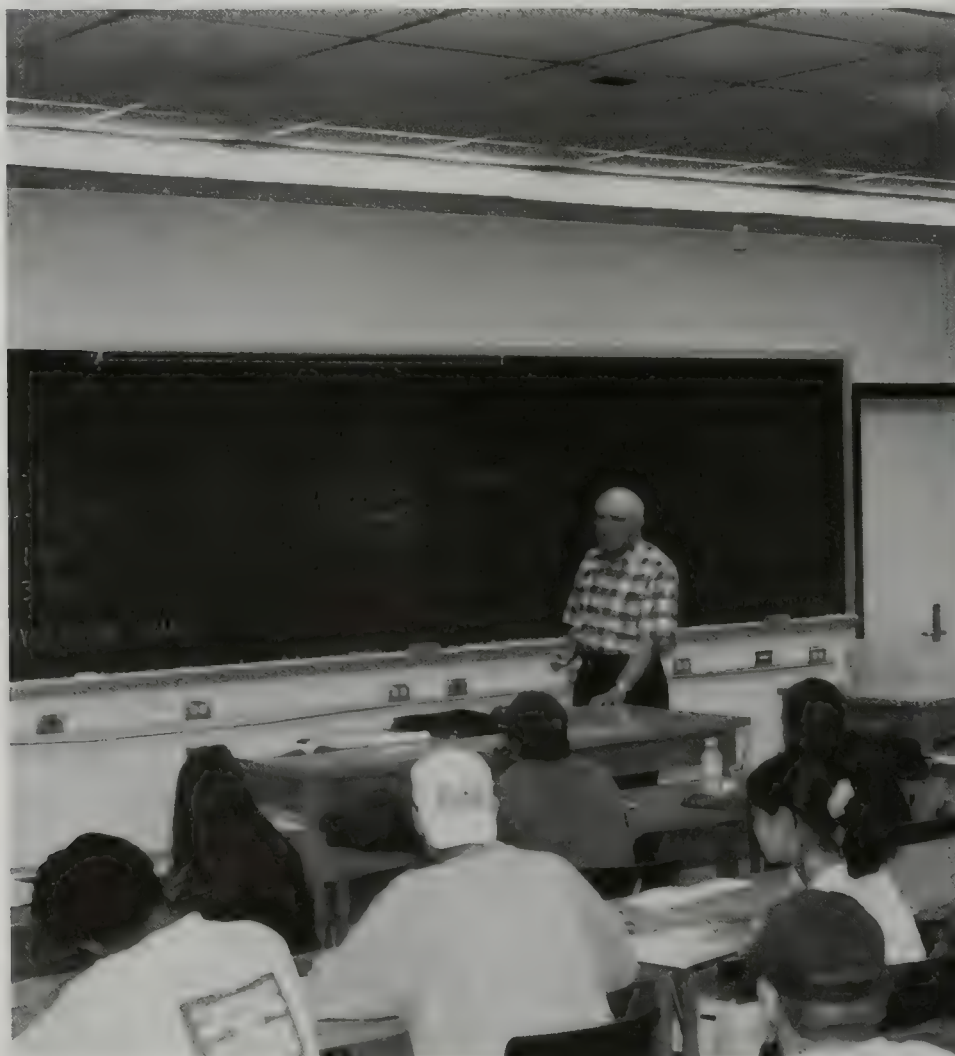
ACES PIN (Duke students only). Duke students in residence during the spring semester receive their ACES personal identification number (PIN) from their advisors. Students not in residence during the spring receive their ACES personal identification number (PIN) with their mailed registration packet. The PIN for Summer Session is the same as the PIN for fall semester 1997. SAFEGUARD YOUR PIN!

Summer telephone registration begins April 2, for all Duke graduate and undergraduate students, regardless of the date of the registration window for fall semester, and continues through the first three days of each summer term. The ACES number is (919) 613-9999. Have your social security number and your PIN available when you call. The ACES course call numbers in this brochure are the same as those in the Summer section of the Summer-Fall 1997 Official Schedule of Courses.

Non-Duke Students. Non-Duke students may be admitted as nondegree (unclassified) students by the director of the Summer Session for summer study if they meet one of the following conditions: (1) hold a degree from a college or university, (2) are presently in good standing at a college or university, (3) have left a college or university in good standing in the past, or (4) have been accepted for the fall at a college or university. No admissions testing is required nor is there an application fee. The completed registration form, included in this bulletin, should be mailed or faxed to the Office of the Summer Session, Box 90059, Duke University, Durham, NC 27708-0059; FAX: (919) 681-8235. Upon receipt of the registration form we will mail you a confirmation letter and fee statement or an explanation of rejection. However, when registering late or close to payment deadlines it is advisable to send tuition and fees to the Office of the Bursar immediately (Box 90035, Duke University, Durham, NC 27708-0035). Registration forms received early will not be processed until summer registration begins.

Interinstitutional Agreement. One course per summer may be taken at a neighboring institution participating in this agreement (UNC-CH, NC State, and NCCU) provided that the student is *concurrently* enrolled at Duke for one full course credit. Credit so earned is not defined as transfer credit since grades in courses taken under this agreement are entered on the official record and used in determining the quality point ratio. The Duke student participating in this program pays the Duke tuition rate for the away course. This agreement does not apply to contract programs such as the American Dance Festival. For more information, contact the Registrar's Office, 103 Allen Building, 684-2813.

International Students. Persons wishing to take Duke credit classes must have a TOEFL score of 550 or above. In addition, if they are not *currently* a university student in good standing, they must meet one of the following conditions: (1) have passed a university entrance exam (Baccalaurat, Abitur, etc.), (2) have completed an undergraduate university degree, (3) have left a university in good standing, or (4) have been accepted to a college or university for the fall. Once an inquiry is received from an international student, an



informational letter, visa request forms, and a copy of the summer bulletin are mailed to the student. The forms, which include a request for a financial statement from a bank certifying that sufficient financial support is available for study at Duke, will be used to complete an I-20 visa form that will then be sent to the student. The student should take this I-20 visa form to the nearest U.S. consulate in order to receive a student visa for the U.S. It may be possible to use a tourist visa if only one course will be taken per summer term at Duke. The registration form, included in this bulletin, should also be completed and returned by the deadlines listed on page 3. Students may also be required to complete an immunization form. Inquiries should be received no later than mid-April in order to complete the registration process in a timely manner. Applicants will be assessed Federal Express charges on return paperwork if registration is received too close to the deadlines listed on page 3.

Independent Studies. An independent study enables a student to pursue individual research and reading in a field of special interest under the supervision of a member of the faculty. Independent studies, though not listed in the Schedule of Courses, are offered by most departments. Students may do an independent study course through the Summer Session either on campus or at a distance (yet in the U.S.) by obtaining and completing an independent study form from the department or from the Summer Session office. The completed independent study form must be submitted to the department of interest which issues an ACES course call number required for registration.

For independent study at a distance, there are additional requirements: the student must work with a colleague of a Duke faculty member at that distant site or the necessary facilities and/or data for the research are available only at that distant site; no compensation (stipend or salary) may be received by the student for the research; the Duke student must be in weekly contact with either the Duke faculty member listed as course instructor or with the faculty supervisor at the site who is in turn in weekly contact with the Duke instructor; and a substantive paper containing significant analysis and interpretation is required to result from the experience. Tuition is the same as regular Summer Session tuition. For information on Independent Study Abroad, contact the Office of Foreign Academic Programs, 121 Allen Building, 684-2174.

Course Enrollment

Introductory level courses are numbered below 100; advanced level courses are numbered 100 and above. Courses numbered 1–49 are primarily but not exclusively for first year students; and courses numbered from 200–299 are primarily for seniors and graduate students.

Maximum Course Program. The maximum program for one term of the summer session is two courses, one of which may be a laboratory science course. In addition, a student may enroll in a physical education activity course for one-half course credit. (Semester hour equivalents are indicated in the schedule section of this bulletin.) A greater load may be possible with the approval of the student's dean or the appropriate director of graduate studies. Non-Duke students must obtain approval for an overload from the director of the Summer Session.

Minimum Enrollment Required. Some courses are offered subject to minimum enrollments. If a course must be cancelled because of inadequate enrollment, this decision is made as early as possible in an attempt to avoid undue hardship on students. Students already enrolled in a course to be cancelled will be notified immediately. If at all possible, courses are offered as scheduled.

Tuition and Fees

(also see section on "Dropping, Withdrawal, and Refunds")

1. Tuition for undergraduates: \$1,485 for each 3 semester hour (s.h.) course, \$1,980 for each 4 s.h. course, \$990 for each half-course program (2 s.h.), \$495 for each quarter-course program (1 s.h.), and \$2,970 for each one and one-half course program (6 s.h.) offered at the Marine Laboratory. **Charges for laboratory courses may not be split up to pay for the classroom portion separately from the lab portion, and vice versa.**
2. Tuition for graduate students: \$495 per unit (s.h.); for an undergraduate course, the tuition rate is the same.
3. Ungraded graduate research: \$600 per unit.
4. Graduate continuation fee: \$1000 for the summer.*
5. Tuition for physical therapy courses: \$530 per unit.
6. Tuition for graduate nursing courses: \$510.10 per unit.
7. Tuition for courses in the Divinity School: \$1,125 per course listed in Term I and \$1,195 per course listed in Term II.
8. Applied Music Fees: \$145 for 1/2 hr. private lessons; \$290 for 1 hr. private lessons. (Music fees are in addition to regular tuition charges.)

Health Fee. Duke students registered for on-campus courses are required to pay a \$66 student health fee per enrolled summer term. **Duke graduate students** registered for Graduate Continuation only are required to pay a \$132 student health fee for the entire summer. **Non-Duke students** registered for on-campus courses are required to pay a \$66 student health fee for each summer term in which they are registered for two or more courses. **Marine Laboratory students** are required to pay a \$57 student health fee per term.

Transcript Fee. A one-time transcript fee of \$15 is assessed to all non-Duke students undertaking summer coursework for credit. Payment of this fee entitles the student to copies of the Duke transcript without further charge.

Auditing Fees.

1. **Charged Audit.** Students carrying less than a full course program may be granted permission by the instructor and the director of the Summer Session to audit one nonlaboratory course except physical education activity courses, studio art classes, applied music courses, computer science courses, foreign program courses, independent study courses, and tutorials. Students must submit to the Summer Session office written permission of the instructor for the student to audit his/her class. Regular deadlines apply. Courses may not be changed from credit to audit (or vice

* **Graduate Continuation Fee.** Graduate students who register for courses in either summer session will be prompted by ACES to register first for continuation. Please note that as long as you register for continuation for the same summer term in which you are taking courses, you will not be charged the continuation fee. Registering for a class in either summer term will meet any requirements for "continuation". However, if you are not registering for coursework, and you are a graduate student who is required to maintain registration during the summer, you should register for continuation only for the whole summer semester and the above fee will apply.



versa) after the drop/add period. **For Arts and Sciences offerings, the auditing cost is half the tuition fee for the course.** Professional school course audit policies may differ; consult the school of interest for more information.

2. **Free Audit.** With permission of the instructor and the director of the Summer Session, students registered for a full course program (two academic courses in the same term) may audit a course at no extra charge (above exceptions apply). Students must submit to the Summer Session office written permission of the instructor for the student to audit his/her class. Regular deadlines apply.

Payment of Tuition and Fees

Students are responsible for calculating their tuition and fees due using the information and fee schedule above— *bills are not sent* to Summer Session students in time to meet the summer tuition deadlines. All tuition and fees and any past due balance should be paid in the Office of the Bursar, 101 Allen Building (Box 90035), by the first day of the term for which you have registered. Problems with meeting these deadlines should be discussed with the Office of the Bursar and your academic dean prior to the start of the term.

The Summer Session retains the right to withdraw students from classes if they never attend, have not paid tuition and fees, or if they have failed to clear with the bursar, by the end of the drop/add period. Those withdrawn for these reasons will be billed the health fee and an administrative withdrawal fee of \$150 per course (\$75 per half-course). Attendance in classes after the first three days of the term obligates the student for the full tuition and fees for the course. (See page 10 on procedure for officially dropping a course.)

Students who, subsequent to withdrawal, clear with the Office of the Bursar may, with written permission of their academic dean, be reinstated in their classes as originally registered and receive regular grades. The administrative withdrawal fee will stand and the student will be liable for full tuition and fees.

"Summer is more laid back and it is easier to focus with only one or two classes."
(Brad Tyler, Summer '96)

Adding

Students may add a course or courses before or during the first three days of the term. Duke students must use ACES; non-Duke students must contact the Summer Session office.

Beginning May13, all Duke students must see their academic dean or director of graduate studies if telephone registration is denied.

Drop/Add

Drop/add (dropping a class and adding a class in its place) may be done prior to the beginning of the term or during the first three days of the term. There are no charges for drop/adds if this does not result in any reduction in course load in the same term. Duke students must use ACES; non-Duke students must contact the Summer Session office.

Never attending a class for which you have registered, or nonpayment for a class, is not an official drop and *will not* drop you from the class roll(s) nor release you from financial obligations. Financial penalties will be assessed.

Dropping, Withdrawal, and Refunds

1. There is no financial obligation of tuition and fees for students who officially drop their course(s) prior to the first day of the term. Duke students must use ACES; non-Duke students must contact the Summer Session Office. Never attending a class for which you have registered, or nonpayment for classes for which you have registered, ***will not*** drop you from the class roll(s) nor release you from financial obligations. Financial penalties will be assessed.
2. There is a financial obligation of \$150 per course (\$75 per half-course or audited course) plus no refund of the health fee for students who drop their course(s) during the first three days of the term if this results in any reduction in course load not offset by adding a course or courses of equal value in the same term. Duke students should use ACES; non-Duke students and Duke students unable to use ACES must contact the Summer Session Office and leave a message on voice mail.
3. After the first three days of the term, students may withdraw from their course(s) for compelling reasons only with the permission of their academic dean and by turning in a completed withdrawal form to the Summer Session Office by 4 p.m. on June 18 for Term I; August 1 for Term II. Duke students obtain withdrawal forms from their dean, and non-Duke students obtain them from the Summer Session Office. Students will receive either a *WP* or *WF* (Withdrawn Passing/Failing) from their instructor(s) for each course withdrawn on their official transcript. There is a financial obligation of full tuition and fees if the student withdraws after 10:00 p.m. on the third day of the term. By not officially withdrawing, and not attending, students may receive a grade of *F* on their official transcript.

Financial Aid

Duke Students. A limited amount of financial aid is available to Duke undergraduate students for summer study on the Durham campus and for summer study abroad programs sponsored by the Office of Foreign Academic Programs (684-2174). Summer financial aid,



determined according to demonstrated need, may consist of institutional grant funds and/or low interest loans from the Federal Stafford Loan Program and the Federal Perkins Loan Program, or College Work Study funds. The summer financial aid for Durham campus study will count against the student's eight semesters of eligibility. To qualify for summer school aid, a student must be enrolled, or accepted for enrollment, at Duke during the academic year immediately preceding or immediately following the summer for which aid is requested. Inquiries concerning need-based financial aid availability and application procedures for the Durham campus should be directed to the Office of Undergraduate Financial Aid, 2106 Campus Drive (684-6225). *Applications should be submitted no later than two weeks before the beginning of each term to the Office of Undergraduate Financial Aid.* Duke graduate

students seeking financial aid for summer study should contact the financial aid officer of the appropriate graduate division.

Application for summer study abroad aid is accomplished by signing up in person in the Office of Foreign Academic Programs, 121 Allen Building. A full description of who is eligible for summer study abroad aid can be found in the foreign program flyers. The deadline for signing up is 5:00 p.m., Friday, February 28, 1997. **THIS DEADLINE IS ABSOLUTE; THERE WILL BE NO EXCEPTIONS.** (Students need not have been accepted into the program in order to sign up for aid, but must have applied to the program.)

Non-Duke students enrolled only for the summer may be eligible to borrow from an outside lender under the Federal Stafford Loan Program in their home state. They should contact their college's financial aid office or their state's department of higher education for information and applications.

Scholarships, Fellowships, Traineeships and Fringe Benefits. It is the responsibility of the student to make arrangements with the appropriate office or department and to make certain that payment, a transfer journal voucher, and/or other appropriate certification covering tuition and fees is received by the Office of the Bursar, 101 Allen Building (Box 90035) by the deadlines listed on page 3.

Athletes. Contact Betty Jessup, 105 Cameron Indoor Stadium, 684-2431.

Employees and Faculty and their Spouses and Children may qualify for educational assistance benefits. The Educational Assistance Benefits form plus a registration form must be completed and submitted to the Summer Session office by the deadlines listed on page 3. Contact Jennifer Frazier, Benefits Administration, 705 Broad Street, to determine eligibility and to receive the Educational Assistance Benefits form (Tel. 684-6723). A registration form can be found in this bulletin.



Duke University Honor Code

An essential feature of Duke University is its commitment to integrity and ethical conduct. Duke's honor system helps to build trust among students and faculty and to maintain an academic community in which a code of values is shared. Instilling a sense of honor, and of high principles that extend to all facets of life, is an inherent aspect of a liberal education.

As a student and citizen of the Duke University community:

- I will not lie, cheat, or steal in my academic endeavors.
- I will forthrightly oppose each and every instance of academic dishonesty.
- I will communicate directly with any person or persons I believe to have been dishonest. Such communication may be oral or written. Written communication may be signed or anonymous.
- I will give prompt written notification to the appropriate faculty member and to the dean of Trinity College or the dean of the School of Engineering when I observe academic dishonesty in any course.
- I will let my conscience guide my decision about whether my written report will name the person or persons I believe to have committed a violation of this code.

I join the student body of Duke University in a commitment to this Code of Honor.

A complete copy of the code is available at the Summer Session office if you need further information.

*"I wanted to give myself a lighter load during my senior year."
(anonymous, Summer '96)*

Facilities and Co-Curricular Activities

The DukeCard. All students enrolled at Duke University may be issued a DukeCard. This card serves as official university identification for all activities and university privileges. Non-Duke students should report to the DukeCard Office, 024 West Union Building (684-5800), to have a DukeCard made and, if desired, encoded to access prepaid "flex" accounts for purchases in campus food, meal plans, bookstores, and retail establishments. The amount of money in a regular flex account may be \$25 or more and must be deposited at the DukeCard Office. A flex account for food only (dining plan debit account) can also be encoded here but will be billed to your bursar's account (see Dining Arrangements).

Bookstores. Call for hours and information. Textbook Store, Bryan Center: 684-6793. Medical Center Bookstore, 106 Facilities Center: 684-2717. Gothic Bookshop, Bryan Center: 684-3986. Cokesbury Bookstore, 017 Gray Building: 660-3417.

Libraries. Call for hours and information. Perkins Library, West Campus: 684-3009. Lilly Library, East Campus: 660-5995. Medical Center Library, located in the Sealy Mudd Building between North and South Hospitals: 660-1111. Divinity School Library, West Campus: 660-3450.

Computer Resources. Central Campus has its own computer room, located at 218 Alexander Ave, Apt. C, containing a cluster of IBM PCs and Macintosh systems connected to DukeNet, which can be accessed with the DukeCard twenty-four hours a day. Also, two computer clusters are available in Perkins Library twenty-four hours a day.

Summer Creative Arts. To enrich your Summer Session experience the Office of University Life (684-4741) and the University Union, in conjunction with the Summer Session office, plan an artistically stimulating environment for the campus and community. Special events such as chamber music by the Ciompi Quartet, jazz in the Sarah P. Duke Gardens, carillon concerts, and film series are offered. See the Special Programs section for information on the American Dance Festival.

Athletics. The athletic department invites your participation in the Summer Session Intramural Program. Engage in intramural softball, 3 on 3 basketball, tennis, racquetball, or golf. Enter softball teams at Captains' Meeting, May 22 in Term I and July 7 in Term II, 6 p.m., Room 104, Card Gym. Play goes on from Monday through Thursday nights between 5 and 9 p.m. during both summer terms. In addition, you are eligible to use the many athletic facilities on Duke's campus, including basketball and tennis courts, swimming pools, track, and weight room (Nautilus, Universal machines, lifestep, lifecycle, rowing machines, and free weights). Physical education equipment is available to all students enrolled in summer school at no charge. Physical education lockers are available for use at no charge, but own locks must be used and removed after each visit. Call 613-7514 for more information on intramural sports and call 684-4006 for more information on physical education equipment and lockers.

See also Special Programs section.

*"I liked the air-conditioning and the beautiful walk through the gardens to West Campus."
(anonymous, Summer '96)*

Student Housing, Transportation, Food, Residential Programs

Living Accommodations. Students using university housing during the summer will live in Central Campus Apartments. These air-conditioned accommodations are fully furnished except for cookware, eating utensils, and linens. Amenities include an outdoor swimming pool, two lighted basketball courts, and four lighted tennis courts. These facilities are bordered by a park with a covered picnic shelter. Single students will be housed, double-occupancy, in one-bedroom apartments at a cost of \$10.62/night per person. Married couples including at least one Duke summer student may live together in the apartments at the following costs: one-bedroom—\$21.24/night; two-bedrooms—\$26.56/night; or three-bedrooms—\$33.84/night. A lounge is available for residential programs. Complete laundry facilities are provided. For further information and a housing application, contact: The Department of Housing Management, Box 90451, (218 Alexander Ave., Apt. B), Duke University, Durham, NC 27708. Tel. (919) 684-4304.



Transportation. University bus service operates seven days a week between the hours of 7:20 a.m. and 11:15 p.m. Consult the schedule at the Housing Office or at the Summer Session office. For ease of access, and in response to student input, classes will be held on West Campus this summer. Students with cars must obtain a parking decal from the Parking Office, 402 Oregon Street (684-7275), entitling them to park at Central Campus Apartments or in any ungated student lot on West Campus. There is no extra charge for the parking decal for students staying at Central Campus Apartments. Many students enjoy the short walk from Central Campus Apartments through the gardens to West Campus, or ride their bicycles. Bicycles may be rented from area bike shops. SAFE Rides, Duke's dusk to dawn escort service, is also available 5 p.m.–7 a.m. Call 684-SAFE (7233) for a van ride across campus or to some off-campus locations (service area maps available at Transportation Office, 684-2281).

Dining Arrangements. Summer dining plan debit accounts are entirely optional, but were developed in response to student demand. Three debit account levels are available: small (\$160 per term), medium (\$375 per term) and large (\$615 per term). Dining plans are charged to your bursar's account and encoded on the DukeCard at the DukeCard Office, 024 West Union, 684-5800. The dining accounts can be used only to purchase food. All campus dining facilities and several area restaurants accept payment via the Duke Card dining or regular flex account. More information is available from Dining and Special Events Administrative Office, 029 West Union, 660-3900.

Kitchens in Central Campus apartments provide another dining option to students living on campus; however, students must provide their own cookware. Grocery items, deli sandwiches, and snacks are available beside the swimming pool at Uncle Harry's General Store (accepts payment via the DukeCard).

Residential Programs. In order to enhance the quality of student life in Central Campus housing, a varied cultural, educational, and recreational program is organized by the Summer Session office. Activities include evening discussions and dining with medical, law, and Trinity College faculty and local experts on issues of current interest, along with outings to recreational sites and shopping centers in the RDU Triangle area. These opportunities enable you to get together with the Summer Session faculty and community in an informal way. In addition, study breaks and outings to special events in the surrounding area are organized (don't miss the annual 4th of July Eno River Festival). Calendars of events will be handed out at the Housing Office and in most classes during the first week of each term, or may be obtained from the Summer Session Office.

Academic, Advisory, and Counseling Services

Students have access to a variety of support services while on the Duke Campus in summer. **Counseling and Psychological Services** (660-1000), located in Page Building, provides confidential individual assistance with personal problems. **The alcohol and substance abuse coordinator** (684-3850), located in the Civitan Building, 2213 Elba Street, next to Duke North Hospital parking deck, offers counseling regarding addiction, whether experienced by yourself or your friends or family members. **The Women's Center** (684-3897), located between Canterbury and SAE, is an advocacy and support center for women concerned with such issues as sexual assault and harassment, eating disorders, and campus climate as a whole, and also sponsors programs designed to promote personal and professional development. **The Career Development Center** (660-1050), in 110 Page, provides numerous



services designed to assist you with planning your career; these include use of a career resource library and access to vocational interest testing and a computerized career information data base. International students may obtain useful information and support at the *International House* (684-3585), at 2022 Campus Drive between East and West campuses. Smaller classes afford opportunities for academic advising and assistance from professors, and such specialized academic centers as the *Women's Studies Program* (684-5683), located in 210 East Duke Building, East Campus, are open to you during one or both summer terms. Academic assistance is available free of charge from the *Academic Skills Center* (684-5917) on the East Campus in individual sessions, or in workshops held at Central Campus apartments; lists of available tutors are provided in each summer term.

"Class goes by faster, and the classes are smaller so you get personal attention."
(Joy Jones, Summer '96)

Special Programs

The Duke Summer Institute in English Language and U.S. Culture. This four-and-a-half-week intensive noncredit English program, directed to intermediate and advanced international students and visitors, provides an integrated language skills curriculum that embeds language learning in the culture of the United States. July 3–August 2, 1997. Classes are held on the Duke campus, with off-campus field trips. Call (919) 684-2621 for a brochure.

Languages for Reading Purposes. These eight-week, noncredit courses are intended for graduate students and other researchers who need to consult texts in *French, German, Spanish*, or classical/medieval *Latin*, and/or who need to satisfy reading knowledge requirements for graduate and professional programs. Students will gain reading skills through guided in-class work, supplemented by intensive independent study of necessary grammar and the opportunity to apply these skills to an individualized project. Limited enrollment. May 22–July 18, 1997, MWTh, 4:30–6 p.m. \$600 plus materials per course. For more information call (919) 684-2621.

The Fuqua School of Business Summer Institute. A five-week intensive English business program, this noncredit program concentrates on American business, communications, and culture and is intended for international students preparing for the M.B.A. or other professional programs in the U.S. July 7–August 8, 1997, at the Fuqua School. Call (919) 660-7868 or 660-7865 for a brochure.

The American Dance Festival. This world renowned program of American and international dance attracts students and dance aficionados to the Duke campus every summer. Over a six-week period (June 12–July 25) you can take a wide variety of dance classes and workshops, participate in the ADF Arts Administrative Internship Program, or simply enjoy the performances. For course registration information or for a season performance brochure, write to the ADF, Box 90772, Duke University, Durham, NC 27708-0772; call (919) 684-6402; FAX (919) 684-5459; or e-mail: adfnc@acpub.duke.edu.

Hosei University Exchange. During the last half of Term II, a group of approximately twenty Japanese students from Hosei University in Tokyo will take classes at Duke and reside at Central Campus from late July to mid-August. The Hosei exchange provides an excellent opportunity for American college students to meet their Japanese counterparts without leaving the country. Call (919) 684-2174 for more information.

Foreign Language Study Opportunities. The summer provides an excellent opportunity to study a foreign language at the beginning, intermediate, or advanced level on the Duke campus. See the Arabic, French, German, Ancient Greek, Italian, Latin, Polish, Russian, Serbian/Croatian, and Spanish language courses in the schedule. See also Languages for Reading Purposes above.

Duke University Nicholas School of the Environment, Marine Laboratory. Located in Beaufort, North Carolina, the Marine Lab offers courses for graduates and undergraduates. For information concerning application and registration, write to the Admissions Office, Duke University Marine Laboratory, 135 Duke Marine Lab Rd., Beaufort, NC 28516. Tel: (919) 504-7502; fax: (919) 504-7648; or e-mail: hnearing@mail.duke.edu.

Precollege Program (Term II). The Precollege Program is designed to provide the academic challenge of college-level courses to qualified college-bound students and to help them prepare for the adjustments they will be making when they enter college. For further information contact: The Precollege Program, 01 West Duke Building, (919) 684-3847. Gifted local high school students may be eligible to take one course per term in the Summer Session. The Summer Session office has more information: (919) 684-2621.

Continuing Education. The Office of Continuing Education and Summer Session at Duke University sponsors the weeklong Duke Writers' Workshop for adults and a number of enrichment summer camps for middle and high school youth, including the Young Writers' Camp, the Creative Writing Workshop, Action-A Science Camp for Young Women, the Duke Drama Workshop, and Expressions: A Fine Arts Day Camp. For more information contact this office (Box 90700) at The Bishop's House, Duke University, Durham, NC 27708-0700. Tel: (919) 684-6259; fax: (919) 681-8235; or e-mail: learn@acpub.duke.edu; or our website: <http://www.learnmore.duke.edu>.

Markets and Management Studies. The Markets and Management Studies Certificate is a six course, nondegree concentration (two core courses, one capstone course, and three electives) that provides a liberal arts approach to undergraduate business education. Its curricular themes center on (1) the globalization of the world economy and the importance of understanding organizational innovations in light of cultural and social differences; (2) the social determination of technological development, and the cultural factors influencing its effectiveness; and (3) the impact of social factors on management styles and practices, including issues of ethics. One or more core and elective courses will be offered each summer, and students will also have access to evening courses during the regular academic year, speaker series, a resource room for students, and special business case study and curriculum collections. Summer offerings in 1997 include : CA 180S.01, ECO 165, ECO 181, EDU 140, MS 120, MS 161, PS 113, SOC 141, and SOC 155. For additional information please contact Barbara Pollock, 250 Sociology-Psychology Building (or Box 90088), Duke University, Durham, NC 27708-0088. Tel: (919) 660-5759; fax: (919) 660-5623; or e-mail: bpoll@soc.duke.edu.



Special/Selected Topics Courses

Term I

CA 180S.01 Cultures of Business and Science. Ideas of culture drawn from anthropology will be used to consider the inner workings of science and business. The course will examine the roles of individuals, cultures, and social organizations in science and business practices. Students will also consider both the ways in which anthropology can aid business *and* the ways that business can help anthropologists understand complex work organizations. Examples from eastern and western Europe, the U.S., Japan, Africa, and Latin America will be explored. *Friedman.*

CA 180S.02 Culture and Everyday Life. In this course the notion of “culture” through a variety of contexts such as fashion magazines, court transcripts, sex ed curricula, ethnographies, migration laws, advertisements, historical narratives, cookbooks, medical textbooks, university policies, and popular films will be explored. The concepts of “taste” and “power,” the development of multiculturalism, the representation of war, the resurgence in genealogy studies, and the global reliance on human rights rhetoric, and how anthropology “translates” these and other cultural moments in our everyday lives will be discussed. Guest speakers are often invited to supplement class lectures and discussions. *Adelman.*

ENG 139B,S Great House Novels of the Eighteenth and Nineteenth Centuries. A consideration of British novels spanning the century in which the Industrial Revolution and British colonialism greatly accelerated, which centrally involve the representation of familial estates. The issues of transmission of property through primogeniture, and social mobility, and the notion of marriage for producing heirs and linking adjoining estates, and England’s governance of Ireland and Scotland will be discussed. Henry Fielding’s *Tom Jones*, Tobias Smollett’s *Humphry Clinker*, Maria Edgeworth’s *Castle Rackrent and Ennui*, Sir Walter Scott’s *Heart of Midlothian*, Jane Austen’s *Pride and Prejudice*, Emily Bronte’s *Wuthering Heights*, and Isaac Disraeli’s *Sybil* may be read. *Thorn.*

ENG 139C,S Twentieth-Century Irish Literature. Much of the greatest and funniest literature in English in this century was composed by the writers of Ireland. This course will explore some of the best known poetry, drama, and fiction of William Butler Yeats, George Bernard Shaw, John Millington Synge, James Joyce, Flann O’Brien, Sean O’Casey, Samuel Beckett, and Seamus Heaney. A few contemporary Irish films, including Neil Jordan’s *Michael Collins* and *The Crying Game* may also be shown. *Moses.*

ENG 169S.01 Twentieth-Century American Women’s Autobiography. Seven twentieth-century American autobiographies whose primary thrust is the author’s experience of education as determinative, for good or ill, of later experience are to be read and explored. To be considered are the ways access and lack of access to different arenas of education are reflected in their later writing careers; their assertion or rejection of roles as representatives of America, of women, or of an ethnic or a racial group; their views of the impact of gender upon their lives; the relation of education to social mobility; and the ways the books function as historical documents. *Thorn.*

ENG 169S.02 American Ethnic Literature. An introduction to the multicultural narrative of the United States, in which ethnicity is to be discovered at the center, and not the margins, of the national imagination. How, for instance, was Mario Puzo able to transform the immigrant huddled masses into the first family of underground capitalism? Why did Nella

Larsen's Harlem Renaissance heroine find so threatening – and so provocative – a best friend “passing” as white? And why did Oscar Hijuelos' Cuban-born songwriter produce twenty-three versions of “Beautiful Maria of My Soul”? Also, Yeziarska, Morrison, and more. *Ferraro*.

ENG 169S.03 Duke Masters. Studies in writers associated with Duke, including William Styron, Fred Chapell, and Anne Tyler; professor-writers Ariel Dorfman and Frank Lentricchia; and our writing faculty: Reynolds Price, James Applewhite, Joe Porter, Elizabeth Cox, Deborah Pope, and Melissa Malouf. The focus will be on selected works by these writers, possibly amplified by classroom visitations by several of these artists. *Strandberg*.

ENG 179S Machos, Martyrs, and Mothers of Revenge. One of the epochal achievements of the Latin American literature boom has been to revivify narrative: what Leslie Fiedler once called the novel of “love and death” has, in particular, come back with a sacramental vengeance and a sacrificial hope. In this course, the American romance, broadly conceived, will be reconfigured by juxtaposing Latin texts in that tradition with their U.S. “precursors” and “rivals.” The procedure is to be followed on its own terms and for its contribution to a transnational discourse of art, eros, and faith. *Ferraro*.

HST 104.01 Latin America in the 30s and 40s: Students, Workers, and Women in Mid-Twentieth Century Latin America. This course focuses on Latin American popular sectors, such as students, workers, and women, during the social and political upheavals from the Great Depression through the Second World War. Drawing on testimonials, fiction, archival documents, and secondary sources, the lived experiences of such people in different Latin American countries as they fought to create new spaces of power in national life will be explored. *Pavilack*.

HST 104.02 Slavery and Culture in the Americas. This course will consider the long history of African slavery in the Americas. The memory of slavery fashioned by academic texts, films, music, and popular literature forms the focus of the class. Students will be encouraged to think critically about the impact of slavery on the socio-cultural development of the Americas as well as the problems of historical imagination which confront those who seek to make us conscious of the living past. *Brown*.

HST 104.03 Modern Military History. This course examines the direction and route of military history in the modern era. Beginning with the fall of Constantinople and final collapse of the Byzantine Empire in 1453, we will explore the evolution of warfare in its social, economic, political, and global context. Special emphasis will be placed on the rise of Islam; on the emergence of Europe as the dominant continent; on the appearance and effect of nations and nationalism; and on the rise of total war in the 19th and 20th centuries. *Silbey*.

HST 104.04 Engendering the Landscape: Rethinking the Historical Geographies of Women's Lives. From the home to the workplace, from the bedroom to the courtroom, in rural and urban spaces, gender has been encoded in our landscapes. This course will examine the various ways space has been physically and ideologically constructed and how these spatial configurations change over time. In particular we shall ask how a gendered analysis can help us rethink notions of space and power. *Bindman*

LIT 123 Sexual Politics: The Question of Pleasure. This course examines perspectives on the role of pleasure in literature, art, and politics. Students will read novels and short stories,

key statements on pleasure, politics, and the arts, and view selected film and video art that suggest a relationship between pleasure and the consumption of sexualized and racialized images. Emphasis on the idea of Black popular culture, and “feminist” art. Texts include *Waiting to Exhale* (McMillan), *Sula* (Morrison), *Justine* (Sade), and *The Autobiography of Alice B. Toklas* (Stein). *Doyle*.

PSY 170G,S Neuroimaging and Cognition. This course examines the history and principles of modern medical imaging techniques, neuroimaging of basic sensory processing, and recent applications to pathological disease states and higher cognitive functions. *Hinton*.

PSY 170Q,S Sports Psychology. An introduction to the major topics and theories relating psychology and sport. Emphasis on student participation and integration of ideas from both the readings as well as personal experiences. *Krishna*.

REL 185.01 Introduction to Roman Catholicism. This course will introduce Roman Catholicism from the Middle Ages to present-day America in a seminar format. We will engage the tradition (or “traditions”) in all its media, from theological tracts, films, and comic books to music, artworks, and devotional objects. Understudied Hispanic and African-American Catholicism will be emphasized. *Byrne*.

REL 185.02 Religion and Feminism. The first half of this course will examine feminist critiques of religious traditions, institutions, and practices, as well as some of the reform and alternatives that feminists have suggested. The second half of this course will examine the role of religion in contemporary American culture, with a particular focus on how religion contributed to an anti-feminist backlash. *Jarrett*.

Term II

CA 180S Anthropology of American Culture. The various theoretical and methodological approaches that anthropologists have used to examine American beliefs and to explore particular social sites, including the rodeo, the high school classroom, the college campus, and the small claims court will be explored. *McCollum*.

HST 104 Christianity/Islam/Judaism. This course will cover the interaction of the three major religions in medieval Europe from the fourth through fifteenth centuries. Emphasis will be placed upon the religions’ textual bases, scholarly/intellectual studies, cultural exchange, and social regulation. There is no prerequisite, but students who have taken courses in western civilization and/or introductory religion courses will be at an advantage. *Morrow*.

HST 195S Russian Revolutionary Cinema. An investigation into the pioneering documentary film techniques used by the first generation of Soviet directors in which the cinema was transformed into a revolutionary medium. The course will center on the films of Sergei Eisenstein, though attention will be paid to the pre-Revolutionary Russian cinema, and to both the propagandistic and the dissident films of the Stalin and post-Stalin years. Comparisons with their Hollywood counterparts will be made. *Miller*.

HST 196S History of Sexuality in America. Exploration of how notions of sexuality, and people’s experiences of it, have changed over time. Topics include the role of sexuality in colonization, the ideology and reality of family values over time among different groups of Americans, the relationship between heterosexuality and homosexuality, the making of gay and lesbian subculture, and sexuality and AIDS. *Lekus*.

PHL 196S Philosophy and Feminism. This course will explore the development and background of current trends in feminist theory. Readings will include differing perspectives within feminism, as well as specific issues within contemporary philosophy, such as the construction of feminist theory of knowledge. *White*.

PSY 170P,S Family Psychology. Exploration of family relationships—marital, parent-child, and sibling—across the family life cycle. Subcultural diversity and the impact of gender will also be highlighted. Potential disruptions and dysfunctionalities in the family life cycle (e.g. marital conflict and divorce; mental or chronic illness; physical, sexual, emotional or substance abuse) and how families cope with such stressful disruptions will also be examined within the context of clinical research and treatment. *Rocheleau*.

ADDITIONAL INFORMATION REGARDING LIT 020S AND UWC 117S/ENG 117A COURSES

LIT 020S: Introduction to Literature. Introduction to the study of literature and other forms of cultural expression, such as film. Different introductory approaches will be used in each section (for example, a systematic account of literary genres, a historical survey of ideas and forms of fiction, concepts of authorship and subjectivity, or of literary meaning and interpretation). More than one national literature or culture represented.

LIT 020S MAY NOT BE REPEATED FOR CREDIT

LIT 020S.01 (Term I) (“A Survey of 18th Century British Literature—Poetry, Drama, Prose”). This course will survey 18th century British literature: from Restoration to Jacobinism, from conduct books to pornography, from periodical writing to the longest novel in the English language. Concentrating on poetry, drama, non-fictional prose, and the novel, students will examine these genres in terms of the gender, judicial, sublime, and economic paradigms currently being used to analyze 18th century literature. *Schurer*.

LIT 020S.02 (Term I) (“Literary Self-determinations: Mapping Third Female Identities”). Utilizing narratives from the Caribbean and by contemporary Hispanic-American writers, this course will investigate ethnic and national female identities in literature and film. Issues to be examined include: how identity is formed, the space of the written versus the oral for women, the missing feminine consciousness, the role of language and assimilation, and what the post-colonial situation means for women writers. *Suarez*.

LIT 020S.03 (Term I) (“Psychoanalysis and Cultural Studies”). Intended as an introduction to psychoanalysis as a tool for cultural analysis, this course will utilize texts by Freud, Lacan, Žižek, Silverman, Butler, de Lauretis, Metz, and others to examine such topics as sexuality and sexual difference, racial difference, cinematic spectatorship and the cinematic apparatus, identification, love and the transference, language and symbolization, and psychological trauma. *Penney*.

LIT 020S.04 (Term I) (“Myths of the Near Future: Literature and Technology”). This course will examine the impact of technology on the form and function of literature in the 20th century, especially the threats and challenges to literature posed by film, televisual technology, and contemporary information technologies which

collectively comprise “cyberculture.” One of the central emphases will be to assess whether contemporary technologies have somehow rendered the traditional concerns of literature “obsolete,” or whether literature might make possible an understanding of these new spaces of experience. *Szeman*.

LIT 020S.05 (Term I) (“Science: Fiction”). This course will explore the ways in which science and fiction intersect, including how science and scientific discourse depend upon fictional constructs, and how fiction—particularly science fiction—may be considered scientific. The concept of the future will serve as the guiding thread: what is the future and can we think it? as science or as fiction? why is it impossible today to imagine a future without science? *Soni*.

LIT 020S.01 (Term II) (“American Fairy Tales”). Examining a range of literature, including Native American mystical tales, slave narratives, self-conscious literary fairy tales, and American books that borrow fairy-tale plot devices, this course will explore such issues as: are there important differences between oral stories and written ones, between intentional fairy tales and books that rely on fairy-tale plots and imagery? what is the role of magic in the fairy tale? what is “American” about American fairy tales? *Hines*.

LIT 020S.02 (Term II) (“Movements of the Avant-garde”). This course will trace the changing meanings and practices of avant-gardism, as it moves from turn of the century Europe to postmodern America. Looking primarily at dada and surrealism, French poststructuralism, and pop art, students will compare differing avant-garde self-definitions, their aesthetic and political practices, and the social conditions conducive to their inception (metropolitan life, technology, function of art and the artist). *Lazen*.

LIT 020S.03 (Term II) (“The Science Fiction Film”). This course follows the evolution of the science fiction film from the inception of cinema through various realizations: the European art ‘sci-fi’ in the 20s; the 50s’ Hollywood wave, Russian variations, and the modern ‘sci-fi’ film. Of central concern will be how these various manifestations make use of the genre’s central concepts of technophobia, utopias and dystopias, social allegory, rationality versus chaos, and the ‘foreign.’ *Beebe*.

UWC 117S/ENG 117A: Advanced Composition I. Emphasis on the connections between substance and structure; revision techniques and inventional procedures. Tailored to the level, needs, and interests of students who enroll. Prerequisite: previous University Writing Course or consent of the director of the Writing Across the University Program. C-L: English 117A.

UWC 117S/ENG 117A MAY NOT BE REPEATED FOR CREDIT

UWC 117S.01/ENG 117A.01 (Term I) (“Reviewing Culture”). This writing workshop introduces students to the art of criticism and reviewing. Students develop as writers by crafting publishable responses to books, film, plays, television, music, and art, and by closely attending to the best reviewers of our time. *Kellogg*.

UWC 117S.02/ENG 117A.02 (Term I) (“The Art of the Essay”). This writing workshop introduces students to the rich, lively, and diverse tradition of the personal essay. Students sharpen their writing skills by creating compelling essays on any topic

of special interest to them, and by close reading of the best essayists of the past and present. *Askounis*.

UWC 117S.01/ENG 117A.01 (Term II) (“Personal Criticism”). This writing workshop helps students develop strategies for deploying personal responses and experiences in the scholarly or academic essay. Students read and craft critical essays that combine the solidity of scholarship with the intimacy of autobiography. *Kellogg*.

UWC 117S.02/ENG 117A.02 (Term II) (“The Art of the Essay”). Same as described in Term I. *Askounis*.



"I enjoy the pace and think I get a great deal more out of the condensed time frame."
(Jason Hall, Summer '96)

Evening Courses

Evening classes are generally offered three times a week, Monday, Tuesday, and Thursday.

TERM I

- AAL 165S: Modern Arabic Literature in Translation.** 6-8:05 p.m. *Chergui*
- CA 180S.01: Culture of Business and Science.** 6-8:05 p.m. *Friedman*
- CA 180S.02: Culture and Everyday Life.** 5-7:05 p.m. *Adelman*
- DRA 099S: Introduction to Performance.** 5-7:05 p.m. *Morris*
- ECO 083: Financial Accounting and Decision Making.** 5-7:05 p.m. *Skender*
- EDU 140: The Psychology of Work.** 5-7:05 p.m. *Ballantyne*
- HST 101C: Terrorism, 1848-1968.** 7:20-9:25 p.m. *Miller*
- HST 104.01: Latin America in the 30s and 40s.** 6-8:05 p.m. *Pavilack*
- HST 104.02: Slavery & Culture In the Americas.** 5-7:05 p.m. *Brown*
- LIT 020S.05: Introduction to Literature ("Science: Fiction").** 6-8:05 p.m. *Soni*
- LIT 123: Sexual Politics: The Question of Pleasure.** 5-7:05 p.m. *Doyle*
- PE 11.02: Cardiorespiratory Conditioning.** Half course. 5-7:05 p.m. *Ogilvie*
- PHL 112: Philosophy of Mind.** 6-8:05 p.m. *Polger*
- PSY 091: Biological Bases of Behavior: Introduction and Survey.** 6-8:05 p.m. *Erickson*
- PSY 099: Personality and Social Behavior: Introduction and Survey.** 5-7:05 p.m. *Rodkin*
- PSY 111: Learning and Adaptive Behavior.** 5-7:05 p.m. *Schmajuk*
- PSY 114: Personality.** 7:20-9:25 p.m. *Glodis*
- REL 186: The Theology and Fiction of C.S. Lewis.** 5-7:05 p.m. *Kort*
- SOC 150: The Changing American Family.** 7:20-9:25 p.m. *Simpson*
- SOC 155: Organizations and Management.** 6-8:05 p.m. *Suhomlinova, O.*
- UWC 117S.01: Advanced Composition I ("Reviewing Culture").** 7-9:30 p.m. MW only, *Kellogg*
- UWC 117S.02: Advanced Composition I ("The Art of the Essay").** 7-9:30 p.m. MW only, *Askounis*
- WST 103: An Introduction to Women's Studies.** 7:20-9:25 p.m. *Adelman*

TERM II

AAL 165S: Modern Arabic Literature in Translation. 6-8:05 p.m. *Chergui*

HST 104: Christianity, Islam, and Judaism in Medieval Times. 6-8:05 p.m. *Morrow*

HST 160: The United States from the New Deal to the Present. 5-7:05 p.m. *Hazirjian*

HST 195S: Russian Revolutionary Cinema. 7:20-9:25 p.m. *Miller*

HST 196S: History of Sexuality in America: 1500-Present. 5-7:05 p.m. *Lekus*

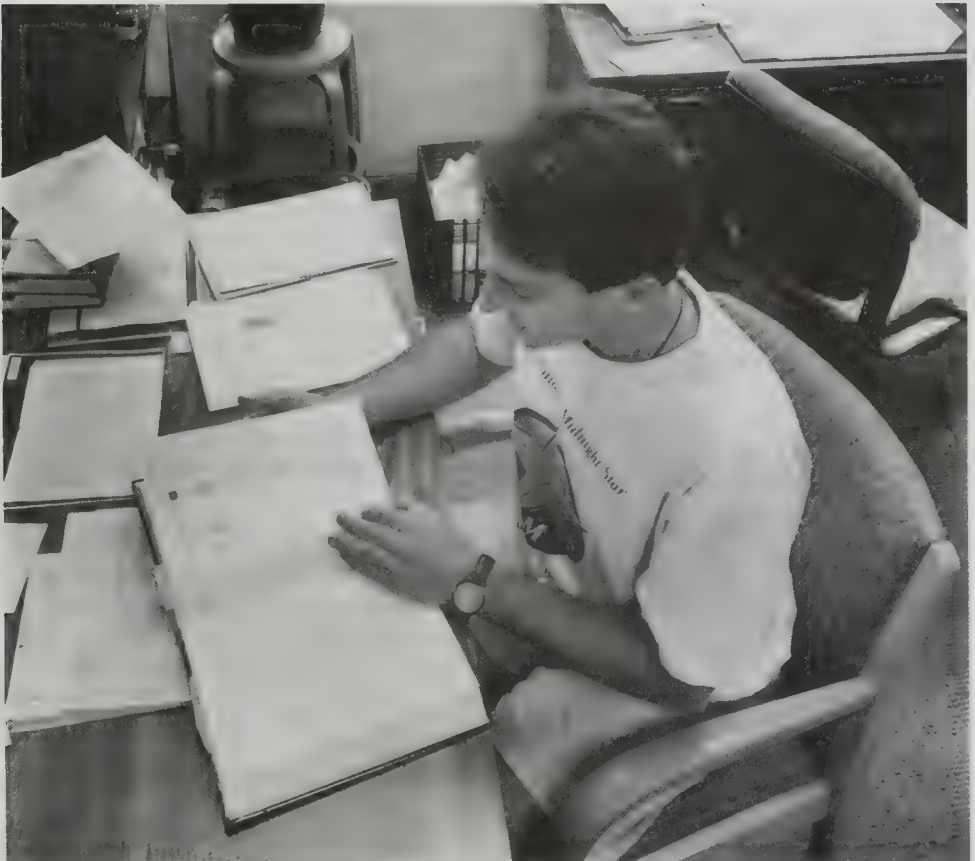
MS 120: Managerial Effectiveness. 6-8:05 p.m. *Stickel*

PE 015.02: Weight Training. Half course. 5-7:05 p.m. *Falcone*

PHL 196S: Philosophy and Feminism, 7:20-9:25 p.m. *White*

UWC 117S.01/ENG 117A.02: Advanced Composition I. ("The Art of the Essay") MW, 7:00-9:30 p.m. *Askounis*

UWC 117S.02/ENG 117A.01: Advanced Composition I. ("Personal Criticism") MW, 7:00-9:30 p.m. *Kellogg*



"Professors seem to be more available in the summer."

(anonymous, Summer '96)

Interdisciplinary Viewpoints/Special Interests

Do you have special interests in certain topics? Are you anxious to investigate a subject from various points of view? Summer 1997 provides you the opportunity to group courses in order to enhance your education. Here are some suggestions.

INTEREST AREA SUGGESTED COURSES

BUSINESS	CA 180S	Cultures of Business and Science. Term I.
	DRA 093	Theater Production/Management. Term I.
	ECO 83	Financial Accounting. Term I & Term II.
	ECO 153	Money and Banking. Term I.
	ECO 157S	Business Cycles/Economic Forecast. Term I.
	ECO 158/258	Economics of the Environment. Term II.
	ECO 181	Corporate Finance. Term I.
	EDU 140	Psychology of Work. Term I.
	MS 120	Managerial Effectiveness. Term II.
	MS 161	Marketing Management. Term I.
	PE 172	Administration in Sports Management. Term I & Term II.
	SOC 141	Consuming Passions. Term II.
	SOC 155	Organizations/Management. Term I.

(A wide variety of economics courses is also being offered. See schedule.)

ABOUT CHILDREN	EDU 121	Infant/Early Childhood Education Programs. Term I.
	EDU 191	Exceptional Children. Term I.
	LIT 20S.01	American Fairy Tales. Term II.
	PSY 097	Developmental Psychology. Term I.
	PSY 119B	Child Clinical Psychology. Term II.
	PSY 137	Adolescence. Term I.
	PSY 170P	Family Psychology. Term II.
	SOC 150	Changing American Family. Term I.

FILM/MEDIA	EDU 211	Education and Mass Media. Term I.
	HST 195S.01	Russian Revolutionary Cinema. Term II.
	LIT 20S.03	The Science Fiction Film. Term II.

GENDER/SEXUALITY/ABOUT WOMEN	CA 127	Culture/Politics–Japan. Term I.
	CA 180S	Anthropology of American Culture. Term II.
	ENG 169S.01	20th-C American Women's Autobiography. Term I.
	ENG 169S.02	American Ethnic Literature. Term I.
	ENG 179S	Machos, Martyrs & Mothers of Revenge. Term I.
	HST 104.04	Engendering the Landscape. Term I.
	HST 196S	History of Sexuality in America. Term II.
	LIT 20S.02	Mapping Third Female Identities. Term I.
	LIT 123	Sexual Politics. Term I.
	PHL 196S	Philosophy and Feminism. Term II.

	PSY 91	Biological Bases of Behavior. Term I.
	PSY 99	Personality and Social Behavior. Term I & II.
	PSY 106	The Psychology of Women. Term I & II.
	PSY 114	Personality. Term I.
	PSY 170P	Family Psychology. Term II.
	REL 185.02	Religion and Feminism. Term I.
	SOC 106	Social Psychology. Term II.
	SOC 141	Consuming Passions. Term II.
	SOC 150	Changing American Family. Term I.
	WST 060	Gender, Social Policy, and Politics. Term II.
	WST 103	Introduction to Women's Studies. Term I.
MODERN DAY CHALLENGES	BIO43D	Ecology and Society. Term II.
	ECO 163	Economics of the Environment. Term I & II.
	ECO 165	International Economic Policy. Term II.
	EDU209	Global Education. Term II.
	EDU101C	Terrorism. Term I.
	HST 123	Madness and Society. Term I.
	PS 093	International Relations. Term I & II.
	PS 113A	International Political Economy. Term I.
	PS 115	Politics and Society in Germany. Term I.
	SOC 150	Changing American Family. Term I.
	WST 060	Gender, Social Policy, and Politics. Term II.
SELF-EXPLORATION	BAA132	Human Evolution. Term I & II.
	CA 180S.02	Culture and Everyday Life. Term I.
	CA 180S	Anthropology of American Culture. Term II.
	EDU 117S	Personal/Social Adjustment. Term I.
	EDU 140	Psychology of Work. Term I.
	LIT 020S.03	Psychoanalysis and Cultural Studies. Term I.
	PHL 112	Philosophy of Mind. Term I.
	PSY 091	Biological Bases of Behavior. Term I.
	PSY 099	Personality and Social Behavior. Term I & II.
	PSY 114	Personality. Term I.
	PSY 170P	Family Psychology. Term II.
	SOC 106	Social Psychology. Term II.
	UWC 117S.01	"Personal Criticism." Term I.
SPORT	PE 120	Theory and Practice of Coaching. Term I.
	PE 170	History and Issues of Sports. Term I.
	PE 172	Administration in Sports Management. Term I & II.
	PSY 170Q,S	Sports Psychology. Term I.

Study Abroad

The Duke University Office of Foreign Academic Programs in cooperation with several University departments, provides opportunities for students to study abroad while earning Duke University credit. Applications from non-Duke students are welcome. Further information about these programs can be obtained from the program directors or the Office of Foreign Academic Programs, 121 Allen Building, Duke University, Box 90057, Durham, NC 27708-0057. Tel (919) 684-2174, Fax (919) 684-3083.

Australia, Sydney. (June 20-August 6). A two-course, six-week program focusing on the biogeography and environmental history of Australia. The program is based at The University of New South Wales in Sydney, with the final week spent in Queensland at the university's research facility at Lady Elliott Island on the Great Barrier Reef and in tropical rainforests near Cairns. The courses are *BIO 101: Biogeography in an Australian Context* (NS) taught by a professor of Duke University, and *HST 100N: History and Development and the Environment: Australia and California* (CZ), taught by a professor of the University of New South Wales. Students live in dormitory-style accommodations. For further information contact the Office of Foreign Academic Programs, 121 Allen Building.

Canada. (Two sessions: May 15-June 13; July 2-August 12). These two six-week sessions provide a complete immersion in French. This is a Duke-approved rather than a Duke-administered program; students receive transfer credit for work successfully completed. Students are placed in one of nine levels of language instruction in each of the sessions. Upon return they are tested and then placed in the appropriate Duke level if they intend to continue with French language studies at Duke. Instruction and accommodations are by the University of Quebec, Trois Rivières campus. For further information contact Janice Engelhardt, Canadian Studies Program, 2016 Campus Drive, Box 90422, Durham, NC 27708-0422 or the Office of Foreign Academic Programs, 121 Allen Building.

France, Paris. (June 16-July 26). This two-course, six-week program provides the opportunity to take Duke courses in the ambience of Paris. *FR 137: Aspects of Contemporary French Culture* (CZ,FL) (cross-listed with Comparative Area Studies) is a conversation course taught by a native French speaker; the second course is taught in French by the Duke program director. Four semesters of college French or equivalent are required. Students live in dormitory-style accommodations. For further information contact the Department of Romance Studies, Box 90257, Durham, NC 27708-0257 or the Office of Foreign Academic Programs, 121 Allen Building.

Germany, Erlangen. (May 13-June 30 and May 1-July 31). (German Language and Culture Program). Duke offers two programs at the Friedrich-Alexander University at Erlangen-Nürnberg. One program (mid May-late June) provides an opportunity to study classroom German at different levels while living with a German family and participating in study, day trips, and excursions. The courses are *GER 150: Advanced Grammar Review, Composition and Current Issues* (FL); *GER 153: Aspects of Contemporary German Culture* (CZ, FL) (cross-listed with Comparative Area Studies). Two semesters of college German or the equivalent are required. In the other program (May 1-July 31), advanced students may choose from a variety of FAU courses all taught in German and remain for a full summer semester. For further information contact Professor Helga Bessent, Department of Germanic Languages and Literature, 116F Old Chemistry Building, Box 90256, Durham, NC 27708-0256 or the Office of Foreign Academic Programs, 121 Allen Building.

Israel, Galilee. (May 19-June 28). This two-course, six-week program gives students an opportunity to participate in an archaeological dig. The program is designed to introduce students to the discipline of field archaeology and to the religious, social, and cultural history of ancient Palestine from the Biblical period through the Islamic period. The field excavations are located in Galilee at ancient Sepphoris. Students register for REL 175: *Archaeology and Art of the Biblical World* (CZ), taught by Professor Beth LaRocca-Pitts of Duke and REL 175/IDC 99/CS 99: *Perspectives in Archaeology* (CZ) taught by Professor Eric Meyers of Duke. All courses are taught in English and are cross-listed with Comparative Area Studies. Students live in dormitory-style accommodations. For further information contact Professor Eric Meyers, Department of Religion, 118 Gray Building, Box 90964, Durham, NC 27708-0964 or the Office of Foreign Academic Programs, 121 Allen Building.

Italy, Rome. (May 22-June 23). This one-course, four-week program explores the history and culture of Rome and includes visits to historical sites and museums, walking lectures, and readings. The course, CS 145/Art 126: *Rome: History of the City* (CZ), examines the history of the city of Rome concentrating on antiquity and its effect on subsequent urban development. About ten days will be spent visiting Pompeii and Herculaneum. Taught in English. Dormitory accommodations in the Intercollegiate Center for Classical Studies in Rome and at the Villa Vergiliana in Cumae. For further information contact Professor Paul Rehak, Department of Classical Studies, 238 Allen Building, Box 90103, or the Office of Foreign Academic Programs, 121 Allen Building.

Italy, Florence. (May 15-June 27). This two-course, six-week program will focus on Renaissance Florentine history and literature (IT 123: *Aspects of Italian Literature: Florence and Tuscany: 400 Years of Literature* (AL) and HST 100B: *History of Renaissance Italy* (CZ)). Both courses will be taught in English. Students will live in a hotel. For further information, contact Professor Valeria Finucci, the Duke program coordinator, Department of Romance Studies, 205 Languages, Duke University, Box 90257, Durham, NC 27708-0257 or the Office of Foreign Academic Programs, 121 Allen Building.

Italy—Jazz (May 15-June 27). This six-week program will offer students a unique opportunity to study jazz music with distinguished Italian musicians under the direction of Duke Professor Paul Jeffrey. Two weeks each will be spent in Dolo (near Venice), Bologna, and Acqui Terme (near Genoa). Students will choose two out of three offered courses in which they will explore the interaction between the American and Italian musical traditions. There will be opportunities for performance for qualified students. For further information contact Professor Paul Jeffrey, Department of Music, 059 Mary Duke Biddle Building, Box 90665, Durham, NC 27708-0665 or the Office of Foreign Academic Programs, 121 Allen Building.

Korea and Taiwan: Mini Dragon Program. (May 15-June 27). This two-course, six week program will study the democratization and political economy of Korea and Taiwan. Students will study three weeks in Korea (Seoul) and three weeks in Taiwan (Taipei) with focus on the political, economic, and social developments in these two young democracies. Numerous excursions and site visits are part of the program. Accommodations in guest houses of the hosting institutions. For information contact Professor Emerson Niou, the program director, Department of Political Science, 406 Perkins Library, Box 90204, Durham, NC 27708-0204, or the Office of Foreign Academic Programs, 121 Allen Building.

Morocco. (mid-June—early August). This two-course, six-week program offers the opportunity to study North African Religion and Moroccan culture in Marrakesh and Fez and at Mohammed V University, Rabat. The program is under the direction of Professor Vincent

Cornell of Duke. The courses are *ARB 100: North African Culture* (AL) and *REL 143 (AAS 164/CST/HST 187/IDC 164): History and Religions of North Africa* (CZ). Both courses are taught in English. Field trips are part of the courses. Accommodations in hotels. For further information contact Professor Vincent Cornell, Department of Religion, 115 Gray Building, Box 90964, or the Office of Foreign Academic Programs, 121 Allen Building.

Russian Republic. (May 11-July 1). This seven-week program offers two Russian language and culture courses in St. Petersburg. Russian language study at different levels will be offered. Classes in St. Petersburg will be taught at the University of St. Petersburg by faculty members of the university. Prerequisite: a minimum of two semesters of college level Russian is suggested. Students will be housed in an apartment hotel or with families. For further information contact Professor Edna Andrews, the Program Director, Department of Slavic Languages and Literatures, 314 Languages Building, Box 90259, Durham, NC 27708-0259 (660-3140) or the Office of Foreign Academic Programs, 121 Allen Building.

Spain. (May 30-July 10). This two-course, six-week program in Sevilla and Madrid offers advanced Spanish students further language training as well as the opportunity to study Spanish culture, history and politics. Participants can choose two of the following courses:



SP 131: Spain, Yesterday and Today (CZ, FL); *SP 137: Art and Civilization* (CZ, FL); *SP 141S: Literature and the Performing Arts* (AL, FL); and *PS 100M.01: Government and Politics of Spain* (SS). (All courses except SP 141S are cross-listed with Comparative Area Studies.) There will also be excursions to Salamanca, Toledo, Segovia, Granada, Malaga, Córdoba and other places. Prerequisites: four semesters of college-level Spanish or equivalent. All courses are conducted in Spanish and students live with Spanish families. For further information contact the program director, Professor Miguel Garci-Gómez, Department of Romance Studies, 205 Languages Building, Box 90257, Durham, NC 27708-0257 or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, London-Drama. (June 26-August 7). This two-course, six-week program offers the opportunity to study drama in performance through seeing over twenty performances of a variety of plays, classic and new, and musicals in London and Stratford-upon-Avon. The courses are *DRA 117S/ENG 176BS: Theater in London: Text* (AL) and *DRA 138S/ENG 176CS: Theater in London: Performance* (AL). Daily classes are taught by Professor John Clum of Duke and a variety of well known British actors, writers, and directors. The program is designed to meet the needs of both the novice with an interest in theater and the drama major. Accommodations in a dormitory of University College, London. For further information, contact the program director, Professor John Clum, Drama Program, 212 Bivins Building, Box 90680, Durham, NC 27708-0680 (phone 919-660-3350; email jclum@acpub.duke.edu) or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, London-Media. (May 13-June 26). This double-course, six-week program explores and analyzes British government and politics, the British media and the sometimes cozy, often acrimonious relations between the two. A double course, *PS 100E: Politics and the Media in Britain* (SS) (cross-listed with Comparative Area Studies) is taught jointly by Professor David Paletz of Duke and British faculty members. The emphasis this year will be on the general election in Britain. Optional internships will be available. Internship credit in fall or spring semester possible. Participants hear from legislators, civil servants, party officials, interest group leaders, media executives and journalists. The group visits (among others) Parliament, the BBC, certain newspapers and magazines, and attends selected media events. Accommodations in dormitories. For further information contact Professor David Paletz, Department of Political Science, 214 Perkins Library, Box 90204 or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, Oxford. (July 4-August 16). This six-week session at New College, Oxford, utilizes the Oxford tutorial system of education supplemented by lectures given at the University of Oxford's International Graduate Summer School by noted British scholars. Areas of study include nineteenth century British literature; Shakespeare; modern British history; politics and government in Britain since 1945; and law: personal injuries in United Kingdom and the United States. For further information contact Professor Thomas Robisheaux, Department of History, 305 Carr Building, Box 90719, Durham, NC 27708-0719 or the Office of Foreign Academic Programs, 121 Allen Building.

Abbreviations and Footnotes

Listing Explanation:

	Department	Course Title	Area of Knowledge	See Footnotes	Credit Value	Semester Hours
		ENG 101B Intro Cultural Studies.(AL)^c			1	3
Cross Listing		ALSO TAUGHT AS: LIT 102				
	100528 01	W53.326	M-F	3:30-4:45	15	Surin, K. J
	ACES Call Number	Section	Campus Building	Room Number	Meeting Days	Meeting Time
						Course Limit
						Instructor

TBA—Class time and meeting place to be arranged. It is the responsibility of the students to contact the professor or the departmental office no later than the first day of class for a given term.

Area of Knowledge codes (AL, CZ, FL, NS, QR, SS) appear between course titles and footnotes. (These codes are not necessarily relevant for non-Duke students.)

Arts and Literatures (AL)

Civilizations (CZ)

Foreign Languages (FL)

Natural Sciences (NS)

Quantitative Reasoning (QR)

Social Sciences (SS)

Buildings: (Please see maps on pages 71-72.)

East Campus (E)

A West Duke

B Carr

C Museum

D East Duke

E Biddle

F Bivins

G Branson

H Art

I Ark

J Gynasium

K East Campus Library

L Sculpture Studio

M Gilbert-Addoms

N Southgate

P Baldwin Auditorium

R East Campus Union

S The Bishop's House

T The Bell Tower

U DownUnder

West Campus

1 Chapel

3 Gray

4 Perkins Library

5 Foreign Languages

6 Old Chemistry

7 Divinity

9 Sociology-Psychology

10 Social Sciences

14 Union Building

17 Card Gymnasium

24 International Studies

25 Sanford Institute

35 Canadian Studies

36 Asian/African Languages

47 Hudson Hall

49 Physics

53 Allen

55 Wannamaker

56 North

58 Biological Sciences

59 Law

60 Business

64 Primate Facility

65 Gross Chemical Lab

66 Teer

75 Intramural Building

77 Golf Course

91 Bryan Center

99 Aquatic Center

Medical Center

DN Davison

HH Hanes House

JN Jones

MC Medical Center

MN Duke North

MS Nanaline H. Duke

SN School of Nursing

TR Trent Drive Hall

Footnotes

A Permission number required to register

B Majors only

C Cross-listed in another department

D Graduate/professional students only

E Course has lab

F Course has lab and recitation

I Course has a lecture

J Additional fee required

L Pass/fail only

M First-year students and/or sophomores only

P Check prerequisite

Q Fee payable in class

R Check for additional times

S Taught off campus

T Skills Course

U Junior and/or senior only

V Language requirement course

X Apply to Marine Lab-Beaufort, NC

2. Also offered for summer semester,
05/22/97-08/16/97

3. See pages 30-33 for description of
foreign programs.

* Seminar

\$ School of the Environment students only

+ Graduate students and seniors

© Permission of instructor except for
graduate students in English or
literature





Schedule of Classes

Class Meetings. Most Summer Session classes meet Monday through Friday each week. The beginnings and endings of all courses coincide with the regular term unless special dates are given in our schedule. Classes meet for twenty-eight days, followed by a one-day reading period before final exams.

Period	Time	Period	Time	Period	Time
1	8:00-9:15 a.m.	4	12:30-1:45 p.m.	7	5:00-7:05 p.m.
2	9:30-10:45 a.m.	5	2:00-3:15 p.m.	8	6:00-8:05 p.m.
3	11:00-12:15 p.m.	6	3:30-4:45 p.m.	9	7:20-9:25 p.m.

Final Examination Schedule

July 2	Wednesday	Term I Final Examinations begin.
		Period: Examination time:
		1 9:00 a.m. - 12:00 noon
		3 2:00 p.m. - 5:00 p.m.
		4, 7, 8 7:00 p.m. - 10:00 p.m.
July 3	Thursday	Term I Final Examinations continue.
		Period: Examination time:
		2 9:00 a.m. - 12:00 noon
		5 2:00 p.m. - 5:00 p.m.
		6, 9 7:00 p.m. - 10:00 p.m.
August 15	Friday	Term II Final Examinations begin.
		Period: Examination time:
		1 9:00 a.m. - 12:00 noon
		3 2:00 p.m. - 5:00 p.m.
		4, 7, 8 7:00 p.m. - 10:00 p.m.
August 16	Saturday	Term II Final Examinations continue.
		Period: Examination time:
		2 9:00 a.m. - 12:00 noon
		5 2:00 p.m. - 5:00 p.m.
		6, 9 7:00 p.m. - 10:00 p.m.

No hour examination may be given within the last three days before the final examination period.

Any deviation from this examination schedule must be approved by the director of the Summer Session.

Duke University does not discriminate on the basis of race, color, age, national and ethnic origin, sex, sexual orientation or preference, or handicap, in the administration of educational policies, admissions policies, financial aid, employment, or any other university program or activity. Inquiries concerning the university's responsibility may be directed to the Equal Opportunity Officer, 0044 Bryan Center, (919) 684-8222.

Summer Term I
May 22-July 3

ARABIC

ARB 001 Elementary Arabic.(FL)^T 1 3
100010 01 W3.228 M-F 11:00-12:15 20 CHERGUI, A

ART HISTORY

ARH 070 Introduction to the
History of Art.(AL) 1 3
100017 01 W10.111 M-F 11:00-12:15 40 ROSENBLATT-FARR

ARH 184 History of Impressionism.(AL)^C 1 3
100024 01 W10.111 M-F 9 30-10:45 30 PARKER, K

ASIAN & AFRICAN LANGUAGES AND
LITERATURE

AAL 165S Modern Arabic Literature in
Translation.(AL)^C 1 3
100003 01 W5.08 MTH 6:00- 8:05 15 CHERGUI, A

BIOCHEMISTRY

BCH 209 Independent Study.^A var var
100059 01 TBA 10 STAFF
100066 02 TBA 10 FIERKE, C A

BCH 210 Independent Study.^A var var
100073 01 TBA 10 STAFF
100080 02 TBA 10 HSIEH, T-S
100087 03 TBA 10 GREENLEAF, A L

BIOLOGICAL ANTHROPOLOGY &
ANATOMY

BAA 093 Introduction to Biological
Anthropology.(NS) 1 3
100045 01 W58 113 M-F 12 30- 1 45 30 CHAN, L-K

BAA 132 Human Evolution.(NS)^P 1 3
100052 01 W58 113 M-F 9 30-10 45 30 WALL, C

BIOLOGY

BIO 118 Principles of Genetics and
Cell Biology I.(NS)^P 1 3
100094 01 W58 113 M-F 3:30- 5 00 40 GRUNWALD, R

BIOMEDICAL ENGINEERING

BME 191 Projects in Biomedical
Engineering.^{AD} var var
100101 01 TBA 10 STAFF

BME 192 Projects in Biomedical
Engineering.^{AD} var var
100108 01 TBA 10 STAFF

BME 265 Advanced Topics in Biomedical
Engineering.^A 1 var
100115 01 TBA 10 STAFF

BME 399 Special Readings in Biomedical Engineer-
ing.^{AD} var
100122 01 TBA 10 STAFF

BOTANY

BOT 224T Special Problems.^{ADX} var
100129 01 TBA 40 STAFF

CELL BIOLOGY

CBI 210 Independent Study.^{A1} var var
100157 01 TBA 10 GARRETT, W E
100164 02 TBA 10 SCHACHAT, F J
100171 05 TBA 10 BONAVENTURA, C
100178 16 TBA 10 GARRETT, W E

CHEMISTRY

CHM 011L Principles of Chemistry.(NS)^{FP} 1 4
100213 01 W65.111 M-F 11:00-12:15 20 DUBAY, G R
W65.204 TH 1:15- 5:15 20 DUBAY, G R

CHM 151L Organic Chemistry.(NS)^P 1 4
100220 01 W65.107 M-F 11:00-12:15 90 WILDER, P
W65 226 TH 1 15- 5 15 90 WILDER, P

CIVIL ENGINEERING

CE 141 Special Topics in Civil Engineering.^A var var
100185 01 TBA 10 STAFF

CE 197 Projects in Civil Engineering.^{AU} var var
100192 01 TBA 10 STAFF

CE 265 Advanced Topics in Civil and Environmental En-
gineering. 1 var
100199 01 TBA 10 STAFF

CE 399 Special Readings in Civil and Environmental En-
gineering.^{AD} var
100206 01 TBA 18 STAFF

CLASSICAL STUDIES

CS 011S Greek Civilization.(CZ) 1 3
100241 01 W53 234 M-F 9 30-10:45 15 BANTA, D

CS 117 Ancient Myth in Literature.(AL) 1 3
100248 01 W53 234 M-F 11 00-12 15 15 ROMERO, J

COMPUTER SCIENCE

CPS 006 Introduction to Program Design
and Analysis I.(QR) 1 3
100227 01 W76 D106 M-F 9:30-11:20 25 STAFF

CPS 120L Introduction to Switching Theory and Logic
Design.(QR)^{CE} 1 4

ALSO TAUGHT AS EE 151L
100234 01 W47 216 M-F 9:30-10:45 03 MARINOS, P N
TBA 03 MARINOS, P N

CONTINUATION

CTN 001 CONTINUATION
100255 01 TBA 900 STAFF

REGISTRATION FORM

To be completed by:

**Non-Duke Students/Visitors
Graduating Duke Seniors
Incoming Duke First Year Students**

Return completed
registration form to:

Summer Session Office
Box 90059
Duke University
Durham, NC 27708-0059
or FAX: (919) 681-8235

Non-Duke student: ☐ Pre-baccalaureate or ☐ Post-baccalaureate

Have you previously attended Duke?

☐ No ☐ Yes, date(s) _____

Have you received a degree from Duke?

☐ No ☐ Yes
if yes, date and type of degree _____

Duke student: ☐ Graduating Duke Senior ☐ Incoming Duke First Year Student

☐ Ms. ☐ Mr. ☐ Dr. _____
first middle initial last name

Social Security Number: _____ - _____ - _____

Date of Birth: _____ / _____ / _____

Mailing Address: _____
street city state zip code

Tel: (____) _____

Fax: (____) _____

e-mail address: _____

Permanent Address: _____
street city state zip code

Tel: (____) _____

I am registering for the following courses:

Term I

Department Abbreviation	Course No. (incl. suffix)	Course Section	Course Credits(cc)	Semester Hours (sh)	✓ For Audit (not for credit)
Department Abbreviation	Course No. (incl. suffix)	Course Section	Course Credits(cc)	Semester Hours (sh)	✓ For Audit (not for credit)

Term II

Instructor's permission/signature (for Audits only):

(over)

Signature

Print Name

I have read pages 8-10 of this bulletin and understand my obligations, including financial penalties I may entail by dropping, withdrawing and/or not attending the above courses for which I have now registered. I also affirm that all the information on this form is complete and correct.

signature date

to be completed by Non-Duke students/Visitors only:

Next of Kin: _____
name relation

Address: _____
street city state zip code

Tel: (____) _____ Fax: (____) _____

e-mail address: _____

Are you at present a college student?

☐ Yes (name, city, and state of the institution): _____

Are you a candidate for a degree? ☐ no ☐ yes, type: _____

expected date of graduation? _____

Are you on any type of academic or disciplinary probation at the above institution? ☐ no ☐ yes
if yes, explain: _____

☐ No

If you are not presently enrolled, have you attended college in the past?

☐ Yes, highest degree held: _____

Name(s) and address(es) of college(s) and date(s) attended:

Were you on any type of academic or disciplinary probation at the time you left any of the above institutions?

☐ No

☐ Yes If yes, explain: _____

☐ No

I have been accepted to begin my college education this fall at _____

_____. Please attach a copy of your admissions offer.

Thank you.

CULTURAL ANTHROPOLOGY

CA 127 Culture and Politics in Japan.(CZ)	1	
100136 01 W10 124 M-F 11:00-12:15	25	ALLISON, A
CA 180S Culture of Business and Science.(SS)	1	
100143 01 W10 232 MTH 6:00-8:05	15	FRIEDMAN, J R
CA 180S Culture and Everyday Life		
100150 02 W10 124 MTH 5:00-7:05	15	ADELMAN, M B

DANCE

DAN 075 Theater Production and Management.^{CE}	1	
ALSO TAUGHT AS DRA 093		
100262 01 W91 023 M-F 2:00-3:15	11	RANDOLPH, D

DRAMA

DRA 093 Theater Production and Management.(AL)^{CE}	1	
ALSO TAUGHT AS DAN 075		
100269 01 W91 023 M-F 2:00-3:15	11	RANDOLPH, D

DRA 099S Introduction to Performance.(AL)

100276 01 Shaefer Theater M-F 12:30-1:45		
100283 02 EG. Shaefer Theater MTH 5:00-7:05		

ECONOMICS

ECO 051D National Income and Public Policy.(SS)	1	
100290 01 W10 229 M-F 9:30-10:45	30	PAUL, D
ECO 052D Competition, Monopoly, and Welfare.(SS)	1	
100297 01 W10 229 M-F 11:00-12:15	40	CLEETUS, R
ECO 083 Financial Accounting and Decision Making.(SS)	1	
100304 01 W10 231 MTH 5:00-7:05	35	SKENDER, C J
ECO 139 Introduction to Econometrics.(QR)^P	1	
100311 01 W10 231 M-F 11:00-12:15	15	MIXON, O S
ECO 149 Microeconomics.(SS)^P	1	
100318 01 W6 116 M-F 11:00-12:15	30	KIMBROUGH, K P
ECO 153 Money and Banking.(SS)^P	1	
100325 01 W10 231 M-F 9:30-10:45	15	YOHE, W P
ECO 154 Macroeconomics.(SS)^P	1	
100332 01 W10 224 M-F 9:30-10:45	20	KIMBROUGH, K P
ECO 157S Business Cycles and Economic Forecasting.(SS)^P	1	
100339 01 W10 224 M-F 11:00-12:15	15	YOHE, W P
ECO 163 Economics of the Environment.(SS)^P	1	
100346 01 W10 225 M-F 9:30-10:45	20	STAFF
ECO 181 Corporate Finance.(SS)^P	1	
100353 01 W10 225 M-F 12:30-1:45	20	SHEN, Y
ECO 239 Introduction to Econometrics.(QR)^P	1	
100360 01 W10 231 M-F 11:00-12:15	05	MIXON, O S
ECO 249 Microeconomics.(SS)	1	
100367 01 W6 116 M-F 11:00-12:15	05	KIMBROUGH, K P
ECO 254 Macroeconomics.(SS)	1	
100374 01 W10 224 M-F 9:30-10:45	05	KIMBROUGH, K P

EDUCATION

EDU 100 Social and Philosophical Foundations of Education.(SS)	1	3
100381 01 W10 311 M-F 9:30-10:45	40	DI BONA, J E
EDU 117S Psychology of Personal and Social Adjustment.(SS)	1	3
100388 01 W5 08 M-F 12:30-1:45	15	MALONE, D M
EDU 118 Educational Psychology.(SS)	1	3
100395 01 W10 311 M-F 2:00-3:15	25	MALONE, D M
EDU 121 Infancy, Early Childhood, and Educational Programs.(SS)	1	3
100402 01 W5 08 M-F 3:30-4:45	15	RIGGSBEE, J J
EDU 140 The Psychology of Work.(SS)	1	3
100409 01 W5 320 MTH 5:00-7:05	20	BALLANTYNE, R H
EDU 149S Exceptional Children.(SS)	1	3
100416 01 W5 305 M-F 11:00-12:15	10	DAVIS, L T
EDU 211 Education and the Mass Media.(SS)	1	3
100423 01 W10 311 M-F 11:00-12:15	25	DI BONA, J E

ELECTRICAL ENGINEERING

EE 061L Introduction to Electric Circuits.^{EP}	1	4
100430 01 W47 216 M-F 11:00-12:15	34	YBARRA, G A
W47 216 TH 2:00-4:45	34	YBARRA, G A
EE 151L Introduction to Switching Theory and Logic Design.^{CE}	1	4
ALSO TAUGHT AS CPS120L		
100437 01 W47 216 M-F 9:30-10:45	07	MARINOS, P N
TBA	07	MARINOS, P N
EE 163L Introduction to Electronics: Integrated Circuits.^P	1	3
100444 01 W47 208 M-F 11:00-12:15	40	GEORGE, R T
W47 208 TH 2:00-4:45	40	GEORGE, R T
EE 164L Electronic Design Projects.^P	1	3
100451 01 TBA	10	GEORGE, R T
EE 191 Undergraduate Research in Electrical Engineering.^{AU}	var	var
100458 03 TBA	10	YBARRA, G A
EE 195 Special Topics in Electrical Engineering.^A	var	var
100465 01 TBA	10	STAFF
EE 196 Special Topics in Electrical Engineering.^A	var	var
100472 01 TBA	10	STAFF
EE 197 Projects in Electrical Engineering.^{AU}	var	var
100479 01 TBA	10	GELENBE, E D
EE 299 Advanced Topics in Electrical Engineering.^A	1	var
100486 01 TBA	10	GELENBE, E D
100493 02 TBA	10	GELENBE, E D
EE 399 Special Readings in Electrical Engineering.^{AD}		3
100500 01 TBA	10	GELENBE, E D

ENGINEERING

EGR 123L Dynamics.^{EP}				1	4
100507	01	W47 232 M-F 9 30-10 45	20	WRIGHT, D	
		W47 232 TH 2:00- 4 45	20	WRIGHT, D	
EGR 183 Projects in Engineering.^A				1	3
100514	01	TBA	10	STAFF	

ENGLISH

ENG 090S Reading Critically: Poetry, Fiction, Drama.(AL)				1	3
100521	01	W53 317 M-F 2 00- 3 15	15	PFAU, T	
ENG 101B Introduction to Cultural Studies.(AL)^C				1	3
ALSO TAUGHT AS: LIT 100					
100528	01	W53 326 M-F 3 30- 4 45	15	SURIN, K J	
ENG 117A S. Advanced Composition I.^{CPT}				1	3
(See page 24 for summaries)					
ALSO TAUGHT AS: UWC117S					
100535	01	W53 306 MW 7:00- 9 30	10	KELLOGG, D R	
100542	02	W53 317 MW 7:00- 9 30	10	ASKOUNIS, C	

ENG 125 English Literature of the Romantic Period.(AL)^V				1	3
100549	01	W53 318 M-F 3 30- 4:45	25	PFAU, T	

ENG 127 British Literature: 1900 to 1945.(AL)				1	3
100556	01	W53 318 M-F 2 00- 3 15	20	MOSES, M V	

ENG 139B Grt House Novels 18-19c(AL)				1	3
100563	01	W53 306 M-F 12.30- 1 45	15	THORN, J J	

ENG 139C 20th Century Irish Lit(AL)				1	3
100570	01	W53 317 M-F 3 30- 4 45	15	MOSES, M V	

ENG 154 American Literature: 1915 to 1960.(AL)				1	3
100577	01	W53 317 M-F 11 00-12 15	18	STRANDBERG, V H	

ENG 169S 20th Century American Women's Autobiography.(AL)				1	3
100584	01	W53 306 M-F 3 30- 4:45	15	THORN, J J	

ENG 169S American Ethnic Literature.				1	3
100591	02	W53 306 M-F 11 00-12.15	15	FERRARO, T	

ENG 169S Duke Masters.				1	3
100598	03	W53 326 M-F 9 30-10 45	15	STRANDBERG, V H	

ENG 179S Machos, Martyrs, Mothers of Revenge.(AL)				1	3
100605	01	W53 317 M-F 12 30- 1 45	15	FERRARO, T	

ENG 275 American Literature since 1915.(AL)				1	3
100612	01	W53.317 M-F 11:00-12:15	07	STRANDBERG, V H	

ENVIRONMENT

ENV 191 Independent Study.^{AU}				var	var
100619	01	TBA	10	MANSFIELD, C	
100626	02	TBA	10	BOYCE, S G	
100633	03	TBA	05	MACFALL, J	
100640	04	TBA	10	FREEDMAN, J	
100647	05	TBA	10	DAVISON, A T	
100654	06	TBA	10	DIGUILIO, R T	
100661	07	TBA	10	DUTROW, G F	
100668	08	TBA	10	URBAN, D	
100675	09	TBA	10	SMITH, K	
100682	10	TBA	10	HEATH, M S	
100689	11	TBA	10	SIGMON, J	
100696	13	TBA	10	KNOERR, K	
100703	14	TBA	10	KRAMER, R	

100710	15	TBA	10	MAGUIRE, L	
100717	16	TBA	10	LOBER, D	
100724	17	TBA	10	RECKHOW, K	
100731	18	TBA	10	RICHARDSON, C	
100738	19	TBA	10	RICHTER, D	
100745	20	TBA	10	SIZEMORE, W R	
100752	21	TBA	10	KATUL, G	
100759	22	TBA	10	STAMBAUGH, W G	
100766	23	TBA	10	STEEN, H K	
100773	24	TBA	10	VESILIND, A	
100780	25	TBA	10	SHARMA, N	
100787	26	TBA	10	WEAR, D	
100794	27	TBA	10	CHRISTENSEN, N	
100801	30	TBA	10	HEALY, R G	
100808	31	TBA	10	MACKINNON, D A	
100815	33	TBA	10	TULIS, J	
100822	34	TBA	10	OREN, R	
100829	35	TBA	10	DUBAY, G R	
100836	36	TBA	10	PILKEY, O H	
100843	39	TBA	10	TERBORGH, J W	
100850	40	TBA	10	VANDENBERG, J	
100857	44	TBA	05	BARBER, R T	
100864	45	TBA	10	BONAVENTURA, C	
100871	46	TBA	05	BONAVENTURA, J	
100878	47	TBA	05	FORWARD, R B	
100885	49	TBA	10	HOWD, P A	
100892	51	TBA	05	KIRBY-SMITH, W	
100899	52	TBA	10	LOZIER, S	
100906	53	TBA	05	RAMUS, J S	
100913	54	TBA	05	RIITTSCHOF, D	
100920	58	TBA	05	ORBACH, M K	
100927	59	TBA	10	JOHNSON, J A	
100934	60	TBA	10	CROWDER, L B	
100941	61	TBA	10	READ, A J	
100948	62	TBA	10	MCCLELLAN-GREEN	
100955	63	TBA	10	ROJSTACZER, S	
100962	64	TBA	10	MIRANDA, M L	
100969	65	TBA	10	AHMAN, D	
100976	66	TBA	10	SNOOK, L	
100983	67	TBA	10	SPENCE, D	
100990	68	TBA	10	STEELMAN, T	
100997	69	TBA	10	STOW, C	
101004	70	TBA	10	KEOHANE, R	
101011	71	TBA	10	COOPER, S	
101018	72	TBA	10	ROMANOWICZ, E	
101025	73	TBA	10	HALPIN, P	
101032	74	TBA	10	MERCER, E	

ENV 228L Physiology of Marine Animals.^{DPX}				var	var
101039	01	TBA	18	FORWARD, R B	

ENV 229L Biochemistry of Marine Animals.^{DPX}				var	var
101046	01	TBA	12	RIITTSCHOF, D	

ENV 292L Biological Oceanography.^{DPX}				var	var
101053	01	TBA	20	BARBER, R T	

ENV 295L Marine Invertebrate Zoology.^{DPX}				var	var
101060	01	TBA	20	KIRBY-SMITH, W	

ENV 299 Independent Studies and Projects.^A				var	var
101067	01	TBA	10	MANSFIELD, C A	
101074	02	TBA	10	BOYCE, S G	
101081	03	TBA	10	MACFALL, J S	
101088	04	TBA	10	FREEDMAN, J A	
101095	05	TBA	10	DAVISON, A T	
101102	06	TBA	10	DIGIULIO, R T	
101109	07	TBA	10	DUTROW, G F	
101116	08	TBA	10	URBAN, D L	
101123	09	TBA	10	SMITH, V K	
101130	10	TBA	10	HEATH, M S	
101137	11	TBA	10	SIGMON, J T	
101144	13	TBA	10	KNOERR, K R	
101151	14	TBA	10	KRAMER, R A	
101158	15	TBA	10	MAGUIRE, L A	
101165	16	TBA	10	LOBER, D J	
101172	17	TBA	10	RECKHOW, K H	
101179	18	TBA	10	RICHARDSON, C J	
101186	19	TBA	10	RICHTER, D D	

101193	20	TBA	10	SIZEMORE, W R
101200	21	TBA	10	KATUL, G G
101207	22	TBA	10	STAMBAUGH, W G
101214	23	TBA	10	STEEN, H K
101221	24	TBA	10	VESILIND, P A
101228	25	TBA	10	SHARMA, N P
101235	26	TBA	10	WEAR, D N
101242	27	TBA	10	CHRISTENSEN, N
101249	30	TBA	10	HEALY, R G
101256	31	TBA	10	MACKINNON, D A
101263	33	TBA	10	TULIS, J J
101270	34	TBA	10	OREN, R
101277	35	TBA	10	DUBAY, G R
101284	36	TBA	10	PILKEY, O H
101291	39	TBA	10	TERBORGH, J W
101298	40	TBA	10	VANDENBERG, J
101305	44	TBA	10	BARBER, R T
101312	45	TBA	10	BONAVENTURA, C
101319	46	TBA	10	BONAVENTURA, J
101326	47	TBA	10	FORWARD, R B
101333	49	TBA	10	HOWD, P A
101340	51	TBA	10	KIRBY-SMITH, W
101347	52	TBA	10	LOZIER, M S
101354	53	TBA	10	RAMUS, J S
101361	54	TBA	10	RITTSCHOF, D
101368	58	TBA	10	ORBACH, M K
101375	59	TBA	10	JOHNSON, J A
101382	60	TBA	05	CROWDER, L B
101389	61	TBA	05	READ, A J
101396	62	TBA	05	MCCLELLAN-GREEN
101403	63	TBA	05	ROJSTACZER, S
101410	64	TBA	05	MIRANDA, M L
101417	65	TBA	10	AHMAN, D
101424	66	TBA	10	SNOOK, L
101431	67	TBA	10	SPENCE, D
101438	68	TBA	10	STEELMAN, T
101445	69	TBA	10	STOW, C
101452	70	TBA	10	KEOHANE, R
101459	71	TBA	10	COOPER, S
101466	72	TBA	10	ROMANOWICZ, E
101473	73	TBA	10	HALPIN, P
101480	74	TBA	10	MERCER, E
101487	99	TBA	10	STAFF

ENV399 Master's Project.^{ADL}

var

101494	01	TBA	10	MANSFIELD, C A
101501	02	TBA	10	BOYCE, S G
101508	03	TBA	10	MACFALL, J S
101515	04	TBA	10	FREEDMAN, J A
101522	05	TBA	10	DAVISON, A T
101529	06	TBA	10	DI GIULIO, R T
101536	07	TBA	10	DUTROW, G F
101543	08	TBA	10	URBAN, D L
101550	09	TBA	10	SMITH, V K
101557	10	TBA	10	HEATH, M S
101564	11	TBA	10	SIGMON, J T
101571	13	TBA	10	KNOERR, K R
101578	14	TBA	10	KRAMER, R A
101585	15	TBA	10	MAGUIRE, L A
101592	16	TBA	10	LOBER, D J
101599	17	TBA	10	RECKHOW, K H
101606	18	TBA	10	RICHARDSON, C J
101613	19	TBA	10	RICHTER, D D
101620	20	TBA	10	SIZEMORE, W R
101627	21	TBA	10	KATUL, G G
101634	22	TBA	10	STAMBAUGH, W G
101641	23	TBA	10	STEEN, H K
101648	24	TBA	10	VESILIND, P A
101655	25	TBA	10	SHARMA, N P
101662	26	TBA	10	WEAR, D N
101669	27	TBA	10	CHRISTENSEN, N
101676	30	TBA	10	HEALY, R G
101683	31	TBA	10	MACKINNON, D A
101690	33	TBA	10	TULIS, J J
101697	34	TBA	10	OREN, R
101704	36	TBA	10	PILKEY, O H
101711	39	TBA	10	TERBORGH, J W
101718	40	TBA	10	VANDENBERG, J
101725	44	TBA	10	BARBER, R T
101732	45	TBA	10	BONAVENTURA, C
101739	46	TBA	10	BONAVENTURA, J

101746	47	TBA	10	FORWARD, R B
101753	49	TBA	10	HOWD, P A
101760	51	TBA	10	KIRBY-SMITH, W
101767	52	TBA	10	LOZIER, M S
101774	53	TBA	10	RAMUS, J S
101781	54	TBA	10	RITTSCHOF, D
101788	58	TBA	10	ORBACH, M K
101795	59	TBA	10	JOHNSON, J A
101802	60	TBA	10	CROWDER, L B
101809	61	TBA	10	READ, A J
101816	62	TBA	10	MCCLELLAN-GREEN
101823	63	TBA	10	ROJSTACZER, C
101830	64	TBA	10	MIRANDA, M L
101837	65	TBA	10	AHMAN, D
101844	66	TBA	10	SNOOK, L
101851	67	TBA	10	SPENCE, D
101858	68	TBA	10	STEELMAN, T
101865	69	TBA	10	STOW, C
101872	70	TBA	10	KEOHANE, R
101879	71	TBA	10	COOPER, S
101886	72	TBA	10	ROMANOWICZ, E
101893	73	TBA	10	HALPIN, P
101900	74	TBA	10	MERCER, E
101907	99	TBA	10	STAFF

FRENCH

FR 001 Elementary French.(FL) ^T	1	3
101914 01 W5 207 M-F 9:30-10:45	20	GARRAWAY, D

FR 063 Intermediate French.(FL) ^{PT}	1	3
101921 01 W5 211 M-F 9:30-10:45	18	WATERS, L

GERMAN

GER 001 First-Year German: Introduction to German Language and Culture.(FL) ^T	1	3
101928 01 W5 109 M-F 9:30-10:45	30	STAFF

GER 014 Intensive German.(FL) ^{TV}	2	6
101935 01 W6 119 M-F 12:30-2:55	10	EVERS, K

GREEK

GRK 014S Intensive Elementary Greek.(FL)	2	6
101942 01 W53 226 M-F 9:00-12:00	15	KUSSEROW, T

HISTORY

HST 101C Terrorism, 1848-1968.(CZ)	1	3
101949 01 W53 226 MTH 7:20-9:25	30	MILLER, M

HST 104 Latin America: 1930s-1940s.(CZ)	1	3
101956 01 W10.225 MTH 6:00-8:05	20	PAVILACK, J

HST 104 Slavery and Culture in the Americas.(CZ)	1	3
101963 02 W5 207 MTH 5:00-7:05	20	BROWN, V A

HST 104 Modern Military History. (CZ)	1	3
101970 03 W53 226 M-F 2:00-3:15	20	SILBEY, D

HST 104 Engendering the Landscape. (CZ)	1	3
101977 04 W53.226 M-F 12:30-1:45	20	BINDMAN, J

HST 110 History of Eastern Europe in Modern Times.(CZ)	1	3
101984 01 W53 318 M-F 11:00-12:15	10	LERNER, W

HST 120 History of Socialism and Communism.(CZ)	1	3
101991 01 W53 226 M-F 3:30-4:45	25	LERNER, W

HST 123S Madness and Society in Historical Perspective.(SS) 1 3
101998 01 W53 306 M-F 9 30-10 45 15 MILLER, M

HST 239 History of Socialism and Communism.(CZ) 1 3
102005 01 W53 226 M-F 3:30- 4 45 15 LERNER, W

HST 299S Eastern Europe in Modern Times.(CZ)⁺ 1 3
102012 01 W53.318 M-F 11 00-12 15 05 LERNER, W

ITALIAN

IT 001 Elementary Italian.(FL)^T 1 3
102019 01 W3.228 M-F 9:30-10:45 22 CASA, L

LATIN

LAT 014S Intensive Elementary Latin.(FL) 2 6
102026 01 W4 421 M-F 9 00-12 00 15 PURVIS, A

LITERATURE

LIT 020S Introduction to Literature.(AL) 1 3
(See pages 23-24 for summary)
102033 01 W4 421 M-F 12 30- 1 45 15 SCHURER, N E
102040 02 W4 421 M-F 2:00- 3:15 15 SUAREZ, L M
102047 03 W4 421 M-F 3:30- 4 45 15 PENNEY, J D
102054 04 W5 207 M-F 12:30- 1:45 15 SZEMAN, I J
102061 05 W5 208 MTH 6 00- 8 05 15 SONI, V

LIT 096 Contemporary Literary and Cultural Theory: An Introduction.(AL) 1 3
102068 01 W3 220 M-F 2:00- 3:15 25 SURIN, K J

LIT 100 Introduction to Cultural Studies.(AL)^C 1 3
ALSO TAUGHT AS ENG 101B
102075 01 W53 326 M-F 3:30- 4 45 15 SURIN, K J

LIT 123 Sexual Politics: The Question of Pleasure.(AL) 1 3
102082 01 W5 211 MTH 5 00- 7 05 30 DOYLE, J B

MANAGEMENT SCIENCES

MS 161 Marketing Management.^P 1 3
102201 01 W10 111 M-F 3:30- 4 45 35 MORRIS, M D

MATHEMATICS

MTH 031L Laboratory Calculus I.(QR) 1 3
102208 01 W49 205 M-F 8 00-10 00 30 STAFF

MTH 032 Introductory Calculus II.(QR)^P 1 3
102215 01 W49 216 M-F 8 00- 9 15 30 STAFF

MTH 103 Intermediate Calculus.(QR)^P 1 3
102222 01 W49 216 M-F 9:30-10:45 30 STAFF

MTH 104 Linear Algebra and Applications.(QR)^P 1 3
102229 01 W49 113 M-F 9:30-10:45 20 STAFF

MECHANICAL ENGINEERING

ME 130L Modeling and Analysis of Dynamic Systems.^{EP} 1 4
102152 01 W47 232 M-F 8 00- 9 15 20 WRIGHT, D
W47 232 MW 2 00- 4 45 20 WRIGHT, D

ME 165 Special Topics in Mechanical Engineering.^A var var
102159 01 TBA 10 STAFF

ME 198 Projects in Mechanical Engineering.^{AP} var var
102166 01 TBA 10 STAFF

ME 265 Advanced Topics in Mechanical Engineering.^A var var
102173 01 TBA 10 STAFF
102180 02 TBA 10 STAFF

ME 399 Special Readings in Mechanical Engineering.^{AD} var
102187 01 TBA 10 STAFF

MICROBIOLOGY

MIC209 INDEPENDENT STUDY^{AU} var var
102194 01 TBA 10 STAFF

MUSIC

MUS 085 Voice.^{AJT} .25 1
102236 01 TBA 10 LAIL, H W

NEW TESTAMENT

NT 103 Hellenistic Greek.^D 1 3
102243 01 TBA 25 EFIRD

NT 104 Hellenistic Greek.^D 1 3
102250 01 TBA 25 EFIRD

NT 116C Selected Later Epistles.^D 1 3
102257 01 TBA 25 EFIRD

PATHOLOGY

PTH 210 Independent study.^A var var
102551 01 TBA 10 KLINTWORTH, G K
102558 02 TBA 10 PIZZO, S
102565 03 TBA 10 BIGNER, D D

PTH 357 Research in Pathology.^{A2} var
102572 01 TBA 10 BIGNER, D D
102579 02 TBA 10 PIZZO, S
102586 04 TBA 10 JENNINGS, R B
102593 06 TBA 10 KOEPKE, J A
102600 07 TBA 10 SHELburne, J D
102607 09 TBA 10 SWENBERG, J A

PTH 367 Special Topics in Pathology.^D var
102614 01 TBA 10 STAFF

PTH 380 Diagnostic Immunology.^A var
102621 01 TBA 40 STAFF

PHARMACOLOGY

PHR 200 Medical Pharmacology.^{DR} 1 4
102390 01 M-F 9 00-12:00 30 STAFF

PHR 210 Individual Study and Research.^A var var
102397 01 TBA 10 STAFF
102404 19 TBA 10 SLOTKIN, T A

PHR 211 Individual Study and Research.^{A2} var var
102411 01 TBA 10 STAFF

PHILOSOPHY

PHL 043S Introduction to Philosophy.(CZ)^M	1	
102369 01 W5 08 M-F 9:30-10:45	15	ALLMAN, J B
PHL 048 Logic.(CZ)	1	
102376 01 W3 220 M-F 3:30-4:45	40	GEISZ, S F
PHL 112 Philosophy of Mind.(CZ)	1	
102383 01 W4 421 MTH 6:00-8:05	15	POLGER, T

PHYSICAL EDUCATION

PE 011 Cardiorespiratory Conditioning.^{LT}	.5	
102278 01 W17 107 M-F 12:30-1:45	30	BUEHLER, A G
102285 02 W17 107 MTH 5:00-7:05	30	OGILVIE, N F
PE 015 Weight Training.^{LT}	.5	
102292 01 W17 M-F 11:00-12:15	30	OGILVIE, N F
102299 02 W17 M-F 3:30-4:45	30	FALCONE, C M
PE 017 Mountain Biking.^{LT}	.5	
102306 01 W17 M-F 12:30-1:45	15	YAKOLA, S D
PE 023 Water Aerobics.^{LT}	.5	
102313 01 W99 M-F 2:00-3:15	25	OGILVIE, J S
PE 120 Theory and Practice of Coaching.	1	
102320 01 W17 104 M-F 11:00-12:15	20	YAKOLA, S
PE 170 History and Issues of Sports.	1	
102327 01 W17 107 M-F 11:00-12:15	15	BUEHLER, A
PE 172 Administration in Sports Management.	1	
102334 01 W17 104 M-F 9:30-10:45	25	ALLEVA, J L

PHYSICAL THERAPY

PT 321 Evaluation and Therapeutic Procedures II.^B		
102544 01 TBA 40	FIGUERS, C C	

PHYSICS

PHY 053L General Physics.(NS)^{FP}	1	
102418 01 W49 113 M-F 11:00-12:15	70	ROGOSA, G L
W49 113 TH 1:40-4:40	70	ROGOSA, G L

POLITICAL SCIENCE

PS 092 Comparative Politics (B).(SS)	1	
102439 01 W9 126 M-F 12:30-1:45	25	ELKINS, C J
PS 093 Elements of International Relations (D).(SS)	1	
102446 01 W9 126 M-F 9:30-10:45	25	COOPER, S B
PS 113A Issues of International Political Economy I: International Trade (D).(SS)	1	
102453 01 W9 126 M-F 2:00-3:15	25	COOPER, S B
PS 115 Politics and Society in Germany (B).(SS)	1	
102460 01 W9 127 M-F 11:00-12:15	25	COLETTA, D V

PSYCHOLOGY

PSY 091 Biological Bases of Behavior: Introduction and Survey (B).(NS)^F	1	
102467 01 W9 127 MTH 6:00-8:05	30	ERICKSON, C J
PSY 097 Developmental Psychology: Introduction and Survey (D).(SS)	1	
102474 01 W9 127 M-F 9:30-10:45	30	BAGWELL, C L

PSY 099 Personality and Social Behavior: Introduction and Survey (P).(SS)	1	
102481 01 W9 126 MTH 5:00-7:05	30	RODKIN, P C
PSY 106 The Psychology of Women (P).(SS)	1	
102488 01 W9 129 M-F 9:30-10:45	30	COLLADO, S M
PSY 111 Learning and Adaptive Behavior (B, C).(NS)^F	1	
102495 01 W9 319 MTH 5:00-7:05	30	SCHMAJUK, N
PSY 114 Personality (P).(SS)	1	
102502 01 W5 109 MTH 7:20-9:25	30	GLODIS, K A
PSY 117 Statistical Methods (G).(QR)^{CT}	1	
ALSO TAUGHT AS: SOC 133		
102509 01 W9 126 M-F 11:00-12:15	30	SCHIFFMAN, H
PSY 119A Abnormal Psychology (P).(SS)	1	
102516 01 W9 129 M-F 11:00-12:15	30	ROBINS, C J
PSY 137 Adolescence (D).(SS)	1	
102523 01 W9 127 M-F 2:00-3:15	30	SPINNAZOLA, J F
PSY 170G Neuroimaging & Cognition	1	
102530 01 W9 319 M-F 3:30-4:45	15	HINTON, S C
PSY 170Q Sports Psychology	1	
102537 01 W9 319 M-F 12:30-1:45	15	KRISHNA, A

PUBLIC POLICY STUDIES

PPS 081 Essentials of Public Speaking.^T	1	
102425 01 W25 03 M-F 9:30-10:45	11	O'DOR, R E
PPS 082 Essentials of Public Speaking.^{TU}	1	
102432 01 W25 03 M-F 9:30-10:45	11	O'DOR, R E

RELIGION

REL 148 Alternative Religion in America.(CZ)	1	
102628 01 W3 220 M-F 11:00-12:15	20	HALMAN, H
REL 185 Introduction to Roman Catholicism.	1	
102635 01 W3 220 M-F 9:30-10:45	20	BYRNE, J
REL 185 Religion and Feminism.	1	
102642 02 W3 220 M-F 12:30-1:45	20	JARRETT, K
REL 186 The Theology and Fiction of C. S. Lewis.(AL)(CZ)	1	
102649 01 W3 220 MTH 5:00-7:05	20	KORT, W

RESEARCH

RES 001		
102656 01 TBA	100	STAFF

SOCIOLOGY

SOC 133 Statistical Methods.(QR)^{CT}	1	
ALSO TAUGHT AS: PSY 117		
102670 01 W9 126 M-F 11:00-12:15	20	SCHIFFMAN, H
SOC 150 The Changing American Family.(SS)	1	
102677 01 W9 129 MTH 7:20-9:25	25	SIMPSON, I H

SOC 155 Organizations and Management.(SS)					1	3
102684	01	W9.128	MTH 6:00-8:05	25	SUHOMLINOVA, O	

SPANISH

SP 001 Elementary Spanish.(FL)^T					1	3
102691	01	W5.305	M-F 9:30-10:45	22	FUENTES, Y	
SP 063 Intermediate Spanish.(FL)^{PT}					1	3
102698	01	W5.109	M-F 11:00-12:15	22	PARRA, C	

STATISTICS

STA 110A Statistics and Data Analysis in the Social Sciences.(QR)					1	3
102705	01	W6.116	M-F 9:30-10:45	30	HUERTA-GOMEZ, G	

UNIVERSITY WRITING COURSE

UWC 117S Advanced Composition I.^{CPT}					1	3
(See page 24 for a summary)						
ALSO TAUGHT AS: ENG 117A						
102768	01	W53.306	MW 7:00-9:30	06	KELLOGG, D R	
102775	02	W53.317	MW 7:00-9:30	06	ASKOUNIS, C	

WOMEN'S STUDIES PROGRAM

WST 103 An Introduction to Women's Studies.(SS)					1	3
102782	01	W10.111	MTH 7:20-9:25	20	ADELMAN, M B	

ZOOLOGY

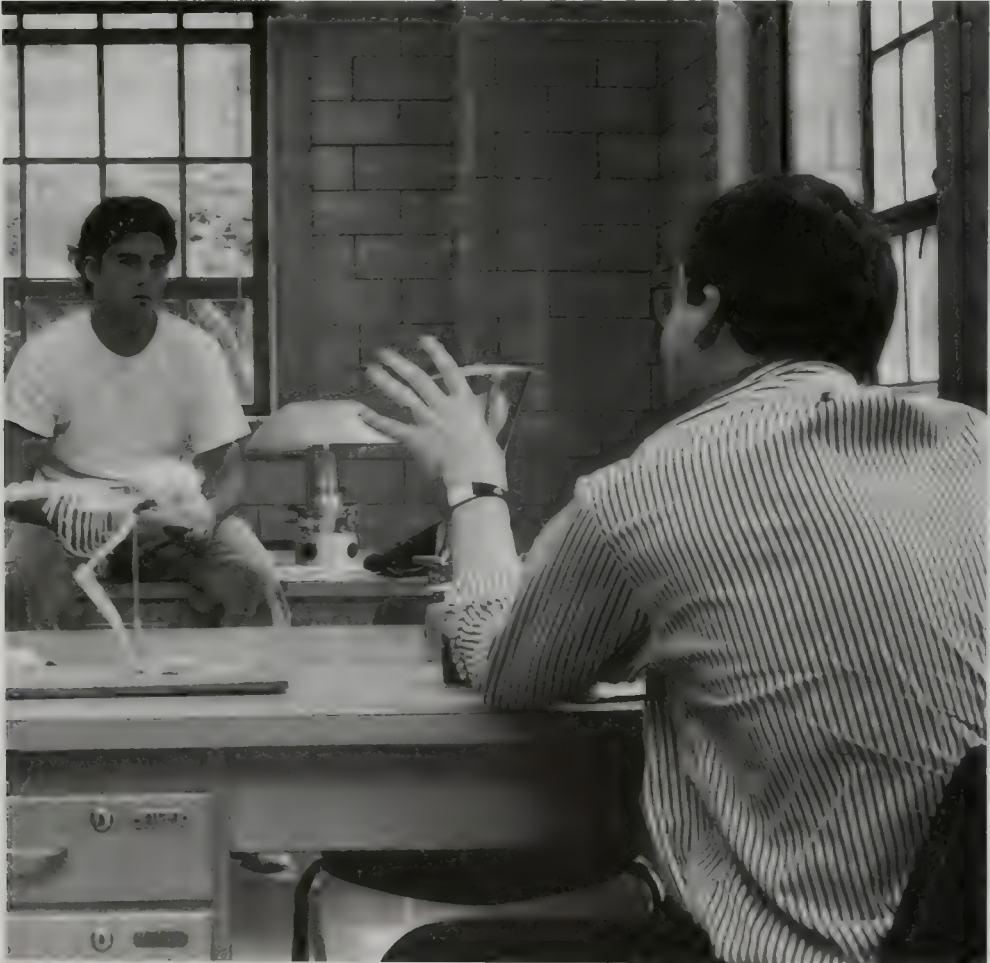
ZOO 353 Research.^{ADX}						var
102789	01	TBA		10	STAFF	
102796	26	TBA		10	RITTSCHOFF, D	
102803	56	TBA		10	SMITH, K K	

ZOO 354 Research.^{AD}						var
102810	15	TBA		10	LIVINGSTONE, D	
102817	39	TBA		10	VOGEL, S	

ZOO 360 Tutorials.^{A2}						var
102824	01	TBA		10	STAFF	

ZOO 360T Tutorial^{AD}						var
102831	01	TBA		10	STAFF	
102838	26	TBA		10	RITTSCHOFF, D	
102845	68	TBA		10	MOTTEN, A	

ZOO 361T Tutorial^{AD}						var
102852	01	TBA		10	STAFF	



Summer Term II

July 7–August 16

AFRICAN AND AFRICAN-AMERICAN STUDIES

AAS 124S Slave Society in Colonial Anglo-America: The West Indies, South Carolina, and Virginia.(CZ)^{C1}

ALSO TAUGHT AS HST 124S

100010 01 W10 232 M-F 12 30- 1 45 05 GASPAR, D B

ARABIC

ARB 002 Elementary Arabic.(FL)^{TV} 1

100927 01 W5 08 M-F 11:00-12:15 20 CHERGUI, A

ART HISTORY

ARH 070 Introduction to the History of Art.(AL) 1

100934 01 W10.111 M-F 11:00-12:15 30 SHANKEN, E

ASIAN AND AFRICAN LANGUAGES AND LITERATURE

AAL 165S Modern Arabic Literature in Translation.(AL) 1

100003 01 W5 08 MTH 6:00- 8 05 15 CHERGUI, A

BIOCHEMISTRY

BCH 209 Independent Study.^A 1 var

100955 01 TBA 10 STAFF

BCH 210 Independent Study.^A 1 var

100962 01 TBA 10 GARRETT, S

100969 02 TBA 10 STAFF

BIOLOGICAL ANTHROPOLOGY & ANATOMY

BAA 093 Introduction to Biological Anthropology.(NS) 1

100941 01 W58 113 M-F 12.30- 1:45 30 SCHMITT, D O

BAA 132 Human Evolution.(NS)^F 1

100948 01 W58 113 M-F 9 30-10 45 40 CANTRELL, J C

BIOLOGY

BIO 043D Ecology and Society.(NS) 1

100976 01 W58 113 M-F 3 30- 4 45 40 STAFF

BIO 118 Principles of Genetics and Cell Biology I.(NS)^F 1

100983 01 W58 130 M-F 3 30- 4 45 40 GRUNWALD, R

BIOMEDICAL ENGINEERING

BME 191 Projects in Biomedical Engineering.^{AU} var var

100990 01 TBA 10 STAFF

BME 192 Projects in Biomedical Engineering.^{AU} var var

100997 01 TBA 10 STAFF

BME 265 Advanced Topics in Biomedical Engineering.^A 1

101004 01 TBA 10 STAFF

BME 399 Special Readings in Biomedical Engineering.^{AD} var

101011 01 TBA 10 STAFF

BOTANY

BOT 218L Barrier Island Ecology.^{CDEPX} 6

ALSO TAUGHT AS ENV 218L

101018 01 TBA 05 EVANS/PETER/WEL

CELL BIOLOGY

CBI 210 Independent Study.^{A2} var var

101032 01 TBA 10 STAFF

101039 16 TBA 10 GARRETT, W E

CHEMISTRY

CHM 011L Principles of Chemistry.(NS)^{FP} 1 4

101074 01 W65 104 M-F 11:00-12:15 20 MONTAGUE-SMITH
W65 203 TH 1 15- 5 15 20 MONTAGUE-SMITH

CHM 012L Principles of Chemistry.(NS)^{FP} 1 4

101081 01 W65 111 M-F 11 00-12 15 20 WOERNER, T E
W65 204 TH 1:15- 5:15 20 WOERNER, T E

CHM 152L Organic Chemistry.(NS)^{EP} 1 4

101088 01 W65 107 M-F 11:00-12:15 70 PINNICK, H W
W65 226 TH 1:15- 5:15 70 PINNICK, H W

CIVIL ENGINEERING

CE 142 Special Topics in Civil Engineering.^A var var

101046 01 TBA 10 STAFF

CE 198 Projects in Civil Engineering.^{AU} var var

101053 01 TBA 10 STAFF

CE 265 Advanced Topics in Civil and Environmental Engineering. 1 var

101060 01 TBA 10 STAFF

CE 399 Special Readings in Civil and Environmental Engineering.^{AD} var

101067 01 TBA 18 STAFF

CLASSICAL STUDIES

CS 012S Roman Civilization.(CZ) 1 3

101109 01 W3 234 M-F 2 00- 3 15 15 BANTA, D

CS 070 The Age of Augustus.(CZ)^C 1 3

ALSO TAUGHT AS HST 094

101116 01 W10 224 M-F 3 30- 4 45 25 UZZI, J

COMPUTER SCIENCE

CPS 001 Computer Science Fundamentals.(QR) 1 3

101095 01 W56 130 M-F 9 30-11.20 40 STAFF

CPS 004 Introduction to Pascal Programming.(QR) 1 3

101102 01 W56 130 M-F 2:00- 3 50 40 STAFF

CONTINUATION

CTN 001 CONTINUATION

101123 01 TBA 900 STAFF

CULTURAL ANTHROPOLOGY

CA 180S Anthropology and American Culture.(SS)

101025 01 W10 124 M-F 2:00- 3:15 15 MCCOLLUM, C C

DRAMA

DRA 099S Introduction to Performance.(AL)

101130 01 Shaefer Theater M-F 12:30- 1:45 14 SCHILLING, S B

ECONOMICS

ECO 051D National Income and Public Policy.(SS)

101137 01 W10 231 M-F 9:30-10:45 40 LAND, M A

ECO 052D Competition, Monopoly, and Welfare.(SS)

101144 01 W10 231 M-F 11:00-12 15 35 RIDLEY, D B

ECO 083 Financial Accounting and Decision Making.(SS)

101151 01 W10.231 M-F 2:00- 3:15 25 AUSTIN, A M

ECO 149 Microeconomics.(SS)^P

101158 01 W6 116 M-F 11:00-12:15 30 PAUL, D W

ECO 154 Macroeconomics.(SS)^P

101165 01 W10 111 M-F 9:30-10:45 25 STAFF

ECO 158 Financial Markets and Investments.(SS)^P

101172 01 W10 111 M-F 12:30-1 45 20 AUSTIN, A M

ECO 163 Economics of the Environment.(SS)^P

101179 01 W10 111 M-F 2:00- 3:15 20 CLEETUS, R

ECO 165 American International Economic Policy.(SS)^{CP}

ALSO TAUGHT AS PPS 165
101186 01 W10 124 M-F 9:30-10:45 15 BRONFENBRENNER

ECO 249 Microeconomics.(SS)

101193 01 W6 116 M-F 11:00-12 15 30 PAUL, D W

ECO 254 Macroeconomics.(SS)

101200 01 W10 111 M-F 9:30-10:45 05 STAFF

ECO 258 Financial Markets and Investments.(SS)^P

101207 01 W10 111 M-F 12:30- 1:45 05 AUSTIN, A M

EDUCATION

EDU 100 Social and Philosophical Foundations of Education.(SS)

101214 01 W5 207 M-F 11:00-12:15 20 DI BONA, J E

EDU 209 Global Education.(SS)

101221 01 W5 207 M-F 12:30- 1:45 20 DI BONA, J E

ELECTRICAL ENGINEERING

EE 141 Linear Control Systems.^P

101228 01 W47 232 M-F 9:30-10:45 10 WRIGHT, D

EE 191 Undergraduate Research in Electrical Engineering.^{AU}

101235 03 TBA 10 YBARRA, G A

EE 195 Special Topics in Electrical Engineering.^A

101242 01 TBA 10 STAFF

EE 197 Projects in Electrical Engineering.^{AU}

101249 01 TBA 10 STAFF
101256 03 TBA 10 GELENBE, E D

EE 198 Projects in Electrical Engineering.^{AU}

101263 01 TBA 10 GELENBE, E D

EE 299 Advanced Topics in Electrical Engineering.^A

101270 01 TBA 10 GELENBE, E D

EE 399 Special Readings in Electrical Engineering.^{AD}

101277 01 TBA 10 STAFF

ENGINEERING

EGR 050 Introduction to Numerical Computing.

101284 01 W47 208 M-F 9:30-10:45 40 STAFF

EGR 165 Special Topics in Engineering.^A

101291 01 TBA 10 STAFF

EGR 184 Projects in Engineering.^A

101298 01 TBA 10 STAFF

ENGLISH

ENG 063S Introduction to Creative Writing.(AL)

101305 01 W53 306 M-F 2:00- 3:15 15 HOCHMAN, L C

ENG 090S Reading Critically: Poetry, Fiction, Drama.(AL)

101312 01 W53 306 M-F 9:30-10:45 15 DAVIDSON, A E

ENG 117A S. Advanced Composition I.^{CPT}

(See page 25 for summaries)

ALSO TAUGHT AS UWC 117S

101319 01 W53 306 MW 7:00- 9:30 10 KELLOGG, D R
101326 02 W10 219 MW 7:00- 9:30 10 ASKOUNIS, C

ENG 137 Nineteenth-Century British Novel.(AL)

101333 01 W53 306 M-F 11:00-12 15 25 DAVIDSON, A E

ENVIRONMENT

ENV 192 Independent Study.^{AU}

101340 01 TBA 10 MANSFIELD, C
101347 02 TBA 10 BOYCE, S G
101354 03 TBA 05 MACFALL, J
101361 04 TBA 10 FREEDMAN, J
101368 05 TBA 10 DAVISON, A T
101375 06 TBA 10 DIGIULIO, R T
101382 07 TBA 10 DUTROW, G F
101389 08 TBA 10 URBAN, D
101396 09 TBA 10 SMITH, K
101403 10 TBA 10 HEATH, M S
101410 11 TBA 10 SIGMON, J
101417 13 TBA 10 KNOERR, K
101424 14 TBA 10 KRAMER, R
101431 15 TBA 10 MAGUIRE, L
101438 16 TBA 10 LOBER, D

101445 17	TBA	10	RECKHOW, K	101886 14	TBA	10	KRAMER, R A
101452 18	TBA	10	RICHARDSON, C	101893 15	TBA	10	MAGUIRE, L A
101459 19	TBA	10	RICHTER, D	101900 16	TBA	10	LOBER, D J
101466 20	TBA	10	SIZEMORE, W R	101907 17	TBA	10	RECKHOW, K H
101473 21	TBA	10	KATUL, G	101914 18	TBA	10	RICHARDSON, C J
101480 22	TBA	10	STAMBAUGH, W G	101921 19	TBA	10	RICHTER, D D
101487 23	TBA	10	STEEN, H K	101928 20	TBA	10	SIZEMORE, W R
101494 24	TBA	10	VESILIND, A	101935 21	TBA	10	KATUL, G G
101501 25	TBA	10	SHARMA, N	101942 22	TBA	10	STAMBAUGH, W G
101508 26	TBA	10	WEAR, D N	101949 23	TBA	10	STEEN, H K
101515 27	TBA	10	CHRISTENSEN, N	101956 24	TBA	10	VESILIND, P A
101522 30	TBA	10	HEALY, R G	101963 25	TBA	10	SHARMA, N A
101529 31	TBA	10	MACKINNON, D A	101970 26	TBA	10	WEAR, D N
101536 33	TBA	10	TULIS, J	101977 27	TBA	10	CHRISTENSEN, N
101543 34	TBA	10	OREN, R	101984 30	TBA	10	HEALY, R G
101550 35	TBA	10	DUBAY, G R	101991 31	TBA	10	MACKINNON, D A
101557 36	TBA	10	PILKEY, O H	101998 33	TBA	10	TULIS, J J
101564 39	TBA	10	TERBORGH, J W	102005 34	TBA	10	OREN, R
101571 40	TBA	10	VANDENBERG, J	102012 35	TBA	10	DUBAY, G R
101578 41	TBA	05	BARBER, R T	102019 36	TBA	10	PILKEY, O H
101585 45	TBA	10	BONAVENTURA, C	102026 39	TBA	10	TERBORGH, J W
101592 46	TBA	05	BONAVENTURA, J	102033 40	TBA	10	VANDENBERG, J
101599 47	TBA	05	FORWARD, R B	102040 44	TBA	10	BARBER, R T
101606 49	TBA	05	HOWD, P A	102047 45	TBA	10	BONAVENTURA, C
101613 51	TBA	05	KIRBY-SMITH, W	102054 46	TBA	10	BONAVENTURA, J
101620 52	TBA	05	LOZIER, M S	102061 47	TBA	10	FORWARD, R B
101627 53	TBA	05	RAMUS, J S	102068 49	TBA	10	HOWD, P A
101634 54	TBA	05	RITTSCHOF, D	102075 51	TBA	10	KIRBY-SMITH, W
101641 58	TBA	05	ORBACH, M K	102082 52	TBA	10	LOZIER, M S
101648 59	TBA	10	JOHNSON, J A	102089 53	TBA	10	RAMUS, J S
101655 60	TBA	10	CROWDER, L B	102096 54	TBA	10	RITTSCHOF, D
101662 61	TBA	10	READ, A J	102103 58	TBA	10	ORBACH, M K
101669 62	TBA	10	MCCLELLAN-GREEN	102110 59	TBA	10	JOHNSON, J A
101676 63	TBA	10	ROJSTACZER, S	102117 60	TBA	05	CROWDER, L B
101683 64	TBA	10	MIRANDA, M L	102124 61	TBA	05	READ, A J
101690 65	TBA	10	AHMAN, D	102131 62	TBA	05	MCCLELLAN-GREEN
101697 66	TBA	10	SNOOK, L	102138 63	TBA	05	ROJSTACZER, S
101704 67	TBA	10	SPENCE, D	102145 64	TBA	05	MIRANDA, M L
101711 68	TBA	10	STEELMAN, T	102152 65	TBA	10	AHMAN, D
101718 69	TBA	10	STOW, C	102159 66	TBA	10	SNOOK, L
101725 70	TBA	10	KEOHANE, R	102166 67	TBA	10	SPENCE, D
101732 71	TBA	10	COOPER, S	102173 68	TBA	10	STEELMAN, T
101739 72	TBA	10	ROMANOWICZ, E	102180 69	TBA	10	STOW, C
101746 73	TBA	10	HALPIN, P	102187 70	TBA	10	KEOHANE, R
101753 74	TBA	10	MERCER, E	102194 71	TBA	10	COOPER, S
ENV 208L Estuarine Ecosystem Processes.	FX	1		102201 72	TBA	10	ROMANOWICZ, E
101760 01	TBA	30	RAMAS/COOPER	102208 73	TBA	10	HALPIN, P
ENV 218L Barrier Island Ecology.	CEPX	1.5		102215 74	TBA	10	MERCER, E
ALSO TAUGHT AS BIO 218L, BOT 218L				102222 99	TBA	10	STAFF
101767 01	TBA	25	EVANS/PETER/WEL	ENV 399 Master's Project.	ADL		var
ENV 219L Marine Ecology.	CDPX		var	102229 01	TBA	10	MANSFIELD, C A
ALSO TAUGHT AS ZOO 203L				102236 02	TBA	10	BOYCE, S G
101774 01	TBA	06	KIRBY-SMITH, W	102243 03	TBA	10	MACFALL, J S
ENV 226L Marine Mammals.	DEPX		4	102250 04	TBA	10	FREEDMAN, J A
101781 01	TBA	10	REED/STAFF	102257 05	TBA	10	DAVISON, A T
ENV 276 Marine Policy.	ACX	1		102264 06	TBA	10	DI GIULIO, R T
ALSO TAUGHT AS PPS 197				102271 07	TBA	10	DUTROW, G F
101788 01	TBA	15	STAFF	102278 08	TBA	10	URBAN, D L
ENV 295L Marine Invertebrate Zoology.	BEFX		var	102285 09	TBA	10	SMITH, V K
101795 01	TBA	20	DIMOCK, R V	102292 10	TBA	10	HEATH, M S
ENV 299 Independent Studies and Projects.	A	var	var	102299 11	TBA	10	SIGMON, J T
101802 01	TBA	10	MANSFIELD, C A	102306 13	TBA	10	KNOERR, K R
101809 02	TBA	10	BOYCE, S G	102313 14	TBA	10	KRAMER, R A
101816 03	TBA	10	MACFALL, J S	102320 15	TBA	10	MAGUIRE, L A
101823 04	TBA	10	FREEDMAN, J A	102327 16	TBA	10	LOBER, D J
101830 05	TBA	10	DAVISON, A T	102334 17	TBA	10	RECKHOW, K H
101837 06	TBA	10	DI GIULIO, R T	102341 18	TBA	10	RICHARDSON, C J
101844 07	TBA	10	DUTROW, G F	102348 19	TBA	10	RICHTER, D D
101851 08	TBA	10	URBAN, D L	102355 20	TBA	10	SIZEMORE, W R
101858 09	TBA	10	SMITH, V K	102362 21	TBA	10	KATUL, G G
101865 10	TBA	10	HEATH, M S	102369 22	TBA	10	STAMBAUGH, W G
101872 11	TBA	10	SIGMON, J T	102376 23	TBA	10	STEEN, H K
101879 13	TBA	10	KNOERR, K R	102383 24	TBA	10	VESILIND, P A
				102390 25	TBA	10	SHARMA, N P
				102397 26	TBA	10	WEAR, D N
				102404 27	TBA	10	CHRISTENSEN, N
				102411 30	TBA	10	HEALY, R G
				102418 31	TBA	10	MACKINNON, D A
				102425 33	TBA	10	TULIS, J J
				102432 34	TBA	10	OREN, R
				102439 36	TBA	10	PILKEY, O H

102446	39	TBA	10	TERBORGH, J W
102453	40	TBA	10	VANDENBERG, J
102460	44	TBA	10	BARBER, R T
102467	45	TBA	10	BONAVENTURA, C
102474	46	TBA	10	BONAVENTURA, J
102481	47	TBA	10	FORWARD, R B
102488	49	TBA	10	HOWD, P A
102495	51	TBA	10	KIRBY-SMITH, W
102502	52	TBA	10	LOZIER, M S
102509	53	TBA	10	RAMUS, J S
102516	54	TBA	10	RITTSCHOF, D
102523	58	TBA	10	ORBACH, M K
102530	59	TBA	10	JOHNSON, J A
102537	60	TBA	10	CROWDER, L B
102544	61	TBA	10	READ, A J
102551	62	TBA	10	MCCLELLAN-GREEN
102558	63	TBA	10	ROJSTACZER, S
102565	64	TBA	10	MIRANDA, M L
102572	65	TBA	10	AHMAN, D
102579	66	TBA	10	SNOOK, L
102586	67	TBA	10	SPENCE, D
102593	68	TBA	10	STEELMAN, T
102600	69	TBA	10	STOW, C
102607	70	TBA	10	KEOHANE, R
102614	71	TBA	10	COOPER, S
102621	72	TBA	10	ROMANOWICZ, E
102628	73	TBA	10	HALPIN, P
102635	74	TBA	10	MERCER, E
102642	99	TBA	10	STAFF

FRENCH

FR 002 Elementary French.(FL)^{TV}				
102649	01	W 5 305	M-F 9:30-10:45	22 STAFF
FR 076 Advanced Intermediate French.(FL)^{FT}				
102656	01	W 5 305	M-F 11:00-12:15	22 DOBELBOWER, N

GEOLOGY

GEO 041 The Dynamic Earth.(NS)				
102663	01	W 10 136	M-F 9:30-10:45	30 MEURER, W P

GERMAN

GER 002 First-Year German: Introduction to German Language and Culture.(FL)^{TV}				
102670	01	W 5 109	M-F 9:30-10:45	20 STAFF
GER 069 Accelerated Intermediate German.(FL)				
102677	01	W 5 109	M-F 11:00-12:15	40 STAFF

GREEK

GRK 015S Intensive Intermediate Greek.(FL)				
102684	01	W 53 234	M-F 9:00-12:00	15 KUSSEROW, T

HISTORY

HST 029 Comparative Revolutions: France, 1789-Russia, 1917.(CZ)				
102691	01	W 53 226	M-F 9:30-10:45	40 MILLER, M
HST 092 America from 1877 to the Present.(CZ)				
102698	01	W 9 129	M-F 9:30-10:45	38 GASPAR, D B
HST 094 The Age of Augustus.(CZ)^C				
ALSO TAUGHT AS CS 070				
102705	01	W 10 224	M-F 3:30-4:45	10 UZZI, J

HST 104 Christianity, Islam, and Judaism in the Medieval World.(CZ)				
102712	01	W 9 129	MTH 6:00-8:05	20 MORROW, M J

HST 124S Slave Society in Colonial Anglo-America: The West Indies, South Carolina, and Virginia.(CZ)^C				
ALSO TAUGHT AS AAS 124S				
102719	01	W 10 232	M-F 12:30-1:45	13 GASPAR, D B

HST 160 The United States from the New Deal to the Present.(CZ)				
102726	01	W 9 127	MTH 5:00-7:05	30 HAZIRJIAN, L G

HST 195S Russian Revolutionary Cinema.(CZ)^U				
102733	01	W 9 128	MTH 7:20-9:25	15 MILLER, M

HST 196S History of Sexuality in America.(CZ)^U				
102740	01	W 9 128	MTH 5:00-7:05	15 LEKUS, I-K

ITALIAN

IT 002 Elementary Italian.(FL)^{TV}				
102747	01	W 53 318	M-F 9:30-10:45	22 CASA, L

LATIN

LAT 015S Intensive Intermediate Latin.(FL)				
102754	01	W 4 421	M-F 9:00-12:00	15 SOSIN, J

LITERATURE

LIT 020S Introduction to Literature.(AL)^V				
(See page 24 for summaries)				
102761	01	W 53 318	M-F 11:00-12:15	15 HINES, M E
102768	02	W 53 318	M-F 12:30-1:45	15 LAZEN, M S
102775	03	W 9 128	M-F 11:00-12:15	15 BEEBE, R W

MANAGEMENT SCIENCES

MS 120 Managerial Effectiveness.^P				
102838	01	W 10 111	MTH 6:00-8:05	30 STICKEL, D J

MATHEMATICS

MTH 019 Precalculus Mathematics.(QR)^T				
102845	01	W 49 216	M-F 8:00-9:15	30 STAFF

MTH 025L Laboratory Calculus and Functions I.(QR)				
102852	01	W 47 216	M-F 8:00-10:00	30 STAFF

MTH 031L Laboratory Calculus I.(QR)				
102859	01	W 49 205	M-F 8:00-10:00	30 STAFF

MTH 032L Laboratory Calculus II.(QR)^P				
102866	01	W 47 208	M-F 8:00-10:00	30 STAFF

MTH 103 Intermediate Calculus.(QR)^P				
102873	01	W 49 113	M-F 9:30-10:45	30 STAFF

MTH 104 Linear Algebra and Applications.(QR)^P				
102880	01	W 49 216	M-F 9:30-10:45	15 STAFF

MECHANICAL ENGINEERING

ME 141L Mechanical Design.^{EP} 1 4
 102782 01 W47 232 M-F 8:00- 9:15 20 WRIGHT, D
 W47 232 TH 2:00- 4:45 20 WRIGHT, D

ME 165 Special Topics in Mechanical Engineering.^A var var
 102789 01 TBA 10 STAFF

ME 198 Projects in Mechanical Engineering.^{AP} var var
 102796 01 TBA 10 STAFF

ME 265 Advanced Topics in Mechanical Engineering.^A var var
 102803 01 TBA 10 WRIGHT, D
 102810 02 TBA 10 STAFF

ME 399 Special Readings in Mechanical Engineering.^{AD} var
 102817 01 TBA 10 STAFF

MICROBIOLOGY

MIC 210 Independent Study.^{AU} var var
 102824 01 TBA 10 STAFF

MIC 399 Special Readings.^{AD} 3
 102831 01 TBA 10 PICKUP, D J

MUSIC

MUS 085 Voice.^{AJT} .25 1
 102887 01 TBA 10 LAIL, H W

PATHOLOGY

PTH 210 Independent study.^A var var
 103090 01 TBA 10 KLINTWORTH, G
 103097 02 TBA 10 PIZZO, S
 103104 03 TBA 10 BIGNER, D D

PTH 357 Research in Pathology. var
 103111 01 TBA 10 BIGNER, D D
 103118 02 TBA 10 PIZZO, S
 103125 04 TBA 10 JENNINGS, R B
 103132 06 TBA 10 KOEPKE, J A
 103139 07 TBA 10 SHELBURNE, J D
 103146 09 TBA 10 SWENBERG, J A
 103153 10 TBA 10 HALE, L P

PTH 362 Autopsy Pathology.^{AP} var
 103160 01 TBA 10 STAFF

PTH 367 Special Topics in Pathology. var
 103167 01 TBA 10 STAFF

PHARMACOLOGY

PHR 210 Individual Study and Research.^A var var
 102957 02 TBA 10 ABOUDONIA, M B
 102964 19 TBA 10 SLOTKIN, T A

PHILOSOPHY

PHL 043S Introduction to Philosophy.(CZ)^M 1 3
 102936 01 W10 219 M-F 2:00- 3:15 15 SCHILTZ, E A

PHL 048 Logic.(CZ) 1 3
 102943 01 W10 219 M-F 9:30-10:45 30 SCHMALTZ, T M

PHL 196S Philosophy and Feminism.(CZ) 1 3
 102950 01 W4 421 MTH 7:20- 9:25 15 WHITE, M A

PHYSICAL EDUCATION

PE 011 Cardiorespiratory Conditioning.^{LT} .5 2
 102894 01 W17 107 M-F 12:30- 1:45 30 BUEHLER, A G

PE 015 Weight Training.^{LT} .5 2
 102901 01 W17. M-F 3 30- 4:45 30 FALCONE, C M
 102908 02 W17. MTH 5:00- 7:05 30 FALCONE, C M

PE 040 Beginning Tennis.^{LT} .5 2
 102915 01 W17 M-F 9 30-10 45 20 YAKOLA, S

PE 041 Intermediate Tennis.^{LT} .5 2
 102922 01 W17. M-F 9.30-10.45 20 YAKOLA, S

PE 172 Administration in Sports Management. 1 3
 102929 01 W17 104 M-F 11:00-12:15 15 BUEHLER, A G

PHYSICAL THERAPY

PT 343 Directed Clinical Experience in Physical Therapy II.^B 2
 103083 01 TBA 40 FISHMAN, L

PHYSICS

PHY 054L General Physics.(NS)^{FP} 1 4
 102971 01 W49 113 M-F 11:00-12.15 50 EVANS, L E
 W49 113 TH 1 40- 4 15 50 EVANS, L E

PHY 055 Introduction to Astronomy.(NS) 1 3
 102978 01 W49 113 M-F 8:00- 9:15 40 SHAPIRO, L T

POLISH

POL 014 Intensive Elementary Polish.(FL) 2 6
 102985 01 TBA 15 STAFF

POLITICAL SCIENCE

PS 091 The American Political System (A).(SS) 1 3
 103006 01 W10 311 M-F 11 00-12 15 40 BATTISTA, J C

PS 092 Comparative Politics (B).(SS) 1 3
 103013 01 W10 311 M-F 12 30- 1 45 40 ARCHER, R

PS 093 Elements of International Relations (D).(SS) 1 3
 103020 01 W10.311 M-F 2:00- 3:15 40 MOSELY, L

PS 151 Introduction to Latin American Politics (B).(SS) 1 3
 103027 01 W10 311 M-F 9 30-10:45 40 ARCHER, R

PSYCHOLOGY

PSY 011 Introductory Psychology (G).(SS) 1 3
 103034 01 W9 127 M-F 12:30- 1:45 33 CANNON, C

PSY 092 Cognitive Psychology: Introduction and Survey (C).(SS) 1 3
 103041 01 W9 127 M-F 11 00-12:15 30 OSWALD, K

PSY 099 Personality and Social Behavior: Introduction and Survey (P).(SS) 1 3
 103048 01 W9 127 M-F 3 30- 4 45 30 RODKIN, P C

PSY 106 The Psychology of Women (P).(SS) 1 3
 103055 01 W9.127 M-F 9 30-10:45 30 COLLADO, S M

PSY 117 Statistical Methods (G).(QR)^{CT} 1 3
 ALSO TAUGHT AS SOC 133
 103062 01 W9 126 M-F 12 30- 1.45 20 JOHNSON, C S

PSY 119B Child Clinical Psychology (D, P).(SS)^F

103069 01 W10 219 M-F 12:30- 1:45 30 LEVY, D J 1 3

PSY 170P Family Psychology

103076 01 W9 128 M-F 2 00- 3:15 15 ROCHELEAU, A E 1 3

PUBLIC POLICY STUDIES

PPS 165 American International Economic Policy.(SS)^{CP}

102992 01 W10.124 M-F 9 30-10 45 05 BRONFENBRENNER 1 3

PPS 197 Marine Policy.(SS)^{ACX}

102999 01 TBA 10 STAFF 1 3

RELIGION

REL 042 Islam.(CZ)

103174 01 W3 220 M-F 9 30-10 45 30 SAFI, O 1 3

REL 045 Religions of Asia.(CZ)

103181 01 W3 220 M-F 11 00-12:15 30 HALMAN, H T 1 3

REL 102 The New Testament.(CZ)

103188 01 W3 228 M-F 9 30-10 45 30 WEST, A 1 3

RESEARCH

RES 001 RESEARCH

103195 01 TBA 100 STAFF var var

RUSSIAN

RUS 014 Intensive Russian.(FL)^{TV}

103209 01 TBA 15 STAFF 2 6

RUS 070 Intensive Intermediate Russian.(FL)^T

103216 01 TBA 15 STAFF 2 6

RUS 110 Intensive Russian Composition and Readings.(AL)(FL)

103223 01 TBA 15 STAFF 2 6

RUS 187 Intensive Advanced Russian.(FL)^P

103230 01 TBA 15 STAFF 2 6

RUS 209 Intensive Advanced Stylistics.(AL)(FL)^P

103237 01 TBA 15 STAFF 2 6

SERBIAN AND CROATIAN

SCR 014 Intensive Elementary Serbian and Croatian.(FL)

103244 01 TBA 15 STAFF 2 6

SOCIOLOGY

SOC 010D Introduction to Sociology.(SS)

103251 01 W9 126 M-F 11 00-12 15 30 O'RAND, A 1 3

SOC 133 Statistical Methods.(QR)^{CT}

103258 01 W9 126 M-F 12:30- 1:45 15 JOHNSON, C S 1 3

ALSO TAUGHT AS PSY 117

SOC 141 Consuming Passions.(SS)

103265 01 W9 129 M-F 12 30- 1 45 25 WILSON, J 1 3

SPANISH

SP 002 Elementary Spanish.(FL)^{TV}

103272 01 W5 211 M-F 8-9:15 22 GOMEZ, F 1 3

SP 076 Advanced Intermediate Spanish.(FL)^{FT}

103279 01 W5 211 M-F 11:00-12:15 22 FELIU, V 1 3

SP 101 Advanced Composition and Conversation.(FL)

103286 01 W5 207 M-F 9 30-10 45 22 POBLETE, J 1 3

STATISTICS

STA 110A Statistics and Data Analysis in the Social Sciences.(QR)

103293 01 W6 116 M-F 9:30-10 45 30 REUTTER, R A 1 3

UNIVERSITY WRITING COURSE

UWC 117S Advanced Composition I.^{CPT}

(See page 25 for summaries) 1 3

ALSO TAUGHT AS ENG 117A

103300 01 W53 306 MW 7:00- 9:30 06 KELLOGG, D R

103307 02 W10 219 MW 7:00- 9:30 06 ASKOUNIS, C

WOMEN'S STUDIES PROGRAM

WST 060 Gender, Social Policy, and Politics.(SS)

103314 01 W5 109 M-F 3 30- 4 45 25 STAFF 1 3

ZOOLOGY

ZOO 203L Marine Ecology.^{CDPX}

103321 01 TBA 06 KIRBY-SMITH, W var

ALSO TAUGHT AS ENV 219L

Summer Semester

May 22 – August 16

BIOLOGY

BIO 126L Marine Mammals.(NS)^{EPX} **4**
 100206 01 TBA 25 STAFF

BIO 193T Tutorial.(NS)^{AUX} **var var**
 100213 01 TBA 10 STAFF
 100220 40 TBA 10 WAINWRIGHT, S A
 100227 51 TBA 10 CRENSHAW, H C

BIO 194T Tutorial.(NS)^{AUX} **var var**
 100234 01 TBA 10 STAFF

BOTANY

BOT 224T Special Problems.^{ADX} **var**
 100311 01 TBA 40 STAFF

BOT 225T Special Problems.^{ADX} **var**
 100318 01 TBA 10 STAFF

BOT 359 Research in Botany.^{DX} **var**
 100325 01 TBA 10 STAFF

BOT 360 Research in Botany.^{DX} **var**
 100332 01 00 STAFF

COMPUTER SCIENCE

CPS 391 Internship.^{AD} **1**
 100780 01 TBA 10 STAFF

CONTINUATION

CTN 001 CONTINUATION
 100794 01 999 STAFF
 100801 02 TBA 999 STAFF

ENVIRONMENT

ENV 191 Independent Study.^{AU} **var var**
 100836 01 TBA 10 MANSFIELD, C
 100843 02 TBA 10 BOYCE, S G
 100850 04 TBA 10 FREEDMAN, J
 100857 05 TBA 10 DAVISON, A T
 100864 06 TBA 10 DIGIULIO, R T
 100871 07 TBA 10 DUTROW, G F
 100878 08 TBA 10 URBAN, D
 100885 09 TBA 10 SMITH, K
 100892 10 TBA 10 HEATH, M S
 100899 11 TBA 10 SIGMON, J
 100906 13 TBA 10 KNOERR, K
 100913 14 TBA 10 KRAMER, R
 100920 15 TBA 10 MAGUIRE, L
 100927 16 TBA 10 LOBER, D
 100934 17 TBA 10 RECKHOW, K
 100941 18 TBA 10 RICHARDSON, C
 100948 19 TBA 10 RICHTER, D
 100955 20 TBA 10 SIZEMORE, W R
 100962 21 TBA 10 KATUL, G
 100969 22 TBA 10 STAMBAUGH, W G
 100976 23 TBA 10 STEEN, H K
 100983 24 TBA 10 VESILIND, A
 100990 25 TBA 10 SHARMA, N
 100997 26 TBA 10 WEAR, D

101004	27	TBA	10	CHRISTENSEN, N
101011	29	TBA	10	RICHTER, D
101018	30	TBA	10	HEALY, R G
101025	31	TBA	10	MACKINNON, D A
101032	33	TBA	10	TULIS, J
101039	34	TBA	10	OREN, R
101046	35	TBA	10	DUBAY, G R
101053	36	TBA	10	PILKEY, O H
101060	39	TBA	10	TERBORGH, J W
101067	40	TBA	10	VANDENBERG, J
101074	44	TBA	10	BARBER, R T
101081	45	TBA	10	BONAVENTURA, C
101088	46	TBA	10	BONAVENTURA, J
101095	47	TBA	10	FORWARD, R B
101102	49	TBA	10	HOWD, P A
101109	51	TBA	10	KIRBY-SMITH, W
101116	52	TBA	10	LOZIER, S
101123	53	TBA	10	RAMUS, J S
101130	54	TBA	10	RITTSCHOF, D
101137	58	TBA	10	ORBACH, M K
101144	59	TBA	10	JOHNSON, J
101151	60	TBA	10	CROWDER, L B
101158	61	TBA	10	READ, A J
101165	62	TBA	10	MCCLELLAN-GREEN
101172	63	TBA	10	ROJSTACZER, S
101179	64	TBA	10	MIRANDA, M L
101186	65	TBA	10	AHMAN, D
101193	66	TBA	10	SNOOK, L
101200	67	TBA	10	SPENCE, D
101207	68	TBA	10	STEELMAN, T
101214	69	TBA	10	STOW, C
101221	70	TBA	10	KEOHANE, R
101228	71	TBA	10	COOPER, S
101235	72	TBA	10	ROMANOWICZ, E
101242	73	TBA	10	HALPIN, P
101249	74	TBA	10	MERCER, E

ENV 192 Independent Study.^{AU} **var var**
 101256 01 TBA 10 MANSFIELD, C
 101263 02 TBA 10 BOYCE, S G
 101270 04 TBA 10 FREEDMAN, J
 101277 05 TBA 10 DAVISON, A T
 101284 06 TBA 10 DIGIULIO, R T
 101291 07 TBA 10 DUTROW, G F
 101298 08 TBA 10 URBAN, D
 101305 09 TBA 10 SMITH, K
 101312 10 TBA 10 HEATH, M S
 101319 11 TBA 10 SIGMON, J
 101326 13 TBA 10 KNOERR, K
 101333 14 TBA 10 KRAMER, R
 101340 15 TBA 10 MAGUIRE, L
 101347 16 TBA 10 LOBER, D
 101354 17 TBA 10 RECKHOW, K
 101361 18 TBA 10 RICHARDSON, C
 101368 19 TBA 10 RICHTER, D
 101375 20 TBA 10 SIZEMORE, W R
 101382 21 TBA 10 KATUL, G
 101389 22 TBA 10 STAMBAUGH, W G
 101396 23 TBA 10 STEEN, H K
 101403 24 TBA 10 VESILIND, A
 101410 25 TBA 10 SHARMA, N
 101417 26 TBA 10 WEAR, D
 101424 27 TBA 10 CHRISTENSEN, N
 101431 30 TBA 10 HEALY, R G
 101438 31 TBA 10 MACKINNON, D A
 101445 33 TBA 10 TULIS, J
 101452 34 TBA 10 OREN, R
 101459 35 TBA 10 DUBAY, G R
 101466 36 TBA 10 PILKEY, O H
 101473 39 TBA 10 TERBORGH, J W
 101480 40 TBA 10 VANDENBERG, J
 101487 44 TBA 10 BARBER, R T
 101494 45 TBA 10 BONAVENTURA, C
 101501 46 TBA 10 BONAVENTURA, J
 101508 47 TBA 10 FORWARD, R B
 101515 49 TBA 10 HOWD, P A
 101522 51 TBA 10 KIRBY-SMITH, W
 101529 52 TBA 10 LOZIER, S
 101536 53 TBA 10 RAMUS, J S
 101543 54 TBA 10 RITTSCHOF, D
 101550 58 TBA 10 ORBACH, M K

Summer Semester

May 22 -August 16

101557	59	TBA	10
101564	60	TBA	10
101571	61	TBA	10
101578	62	TBA	10
101585	63	TBA	10
101592	64	TBA	10
101599	65	TBA	10
101606	66	TBA	10
101613	67	TBA	10
101620	68	TBA	10
101627	69	TBA	10
101634	70	TBA	10
101641	71	TBA	10
101648	72	TBA	10
101655	73	TBA	10
101662	74	TBA	10

JOHNSON, J
CROWDER, L B
READ, A J
MCCLELLAN-GREEN
ROJSTACZER, S
MIRANDA, M L
AHMAN, D
SNOOK, L
SPENCE, D
STEELMAN, T
STOW, C
KEOHANE, R
COOPER, S
ROMANOWICZ, E
HALPIN, P
MERCER, E

ENV 299 Independent Studies and Projects. ^A	var	var
101669	01	TBA 10
101676	59	TBA 10
101683	60	TBA 10
101690	61	TBA 10
101697	62	TBA 10
101704	63	TBA 10
101711	64	TBA 10
101718	65	TBA 10
101725	66	TBA 10
101732	67	TBA 10
101739	68	TBA 10
101746	69	TBA 10
101753	70	TBA 10
101760	71	TBA 10
101767	72	TBA 10
101774	73	TBA 10
101781	74	TBA 10

ENV 399 Master's Project. ^{ADL}	var
101788	59 TBA 10
101795	60 TBA 10
101802	61 TBA 10
101809	62 TBA 10
101816	63 TBA 10
101823	64 TBA 10
101830	65 TBA 10
101837	66 TBA 10
101844	67 TBA 10
101851	68 TBA 10
101858	69 TBA 10
101865	70 TBA 10
101872	71 TBA 10
101879	72 TBA 10
101886	73 TBA 10
101893	74 TBA 10

GEOLOGY

GEO 371 Advanced Topics in Geology. ^{ADX}	3
102019	01 TBA 10 HOWD, P A

GLOBAL MBA

GBA 312G Decision Models. ^{AP}	3
101998	01 TBA 50 STAFF
GBA 320G Managerial Effectiveness for the Global Executive. ^{AP}	3
102005	01 TBA 50 STAFF
GBA 441G International Financial Statement Analysis. ^{AP}	3
102012	01 TBA 50 STAFF

NURSING

NUR 303 Issues in Contemporary Health Care Organizations. ^D	3
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103510	01 MSN 1017 W 1:00-4:00 99	GOODWIN
103517	02 TBA 30	GOODWIN

NUR 308 Applied Statistics. ^{DP}				2
103524	01	TBA	30	CHAMPAGNE, M T

NUR 312 Research Utilization in Advanced Nursing Practice. ^{DP}				3
103531	01 MSN 1017 T	9:00-12:00	99	WALLSTEN, S

NUR 313 Thesis. ^D				var
103538	02	TBA	10	BRUNDAGE, D B
103545	03	TBA	10	HAWTHORNE, M H
103552	04	TBA	10	DENMAN, S
103559	05	TBA	10	MCINTIRE, A S N
103566	06	TBA	10	MCCONNELL
103573	07	TBA	10	CHAMPAGNE, M T
103580	08	TBA	10	WALLSTEN, S
103587	09	TBA	10	GOODWIN, L
103594	10	TBA	10	HAVENS, D S
103601	11	TBA	10	BLOOD-SIEGFRIED
103608	12	TBA	10	OEHLER, J M
103615	13	TBA	10	TURNER, B S
103622	14	TBA	10	FRIEDMAN, B J

NUR 314 Nonthesis Option. ^D				var
103629	02	TBA	10	BRUNDAGE, D B
103636	03	TBA	10	HAWTHORNE, M H
103643	04	TBA	10	HEWITT, D N
103650	05	TBA	10	MCINTIRE, A S N
103657	06	TBA	10	WILKMAN, M
103664	07	TBA	10	CHAMPAGNE, M T
103671	08	TBA	10	WALLSTEN, S
103678	09	TBA	10	QUIMETTE, R M
103685	10	TBA	10	HAVENS, D S
103692	11	TBA	10	BLOOD-SIEGFRIED
103699	12	TBA	10	OEHLER, J M
103706	13	TBA	10	TURNER, B S
103713	14	TBA	10	FRIEDMAN, B J
103720	15	TBA	10	DENMAN, S
103727	16	TBA	10	LORIMER
103734	17	TBA	10	GOODWIN, C
103741	18	TBA	10	MCCONNELL
103748	19	TBA	10	MESSICK
103755	20	TBA	10	PRICE, M

NUR 323 Foundations of Advanced Acute/Critical Care Nursing.^{DP}				3
103762	01	MSN 1046 T	1:00-4 00 35	BRUNDAGE, D J

NUR 325 Clinical Nurse Specialist Practicum: Acute/Critical Care Nursing. ^{DP}		3
103769	01 TBA 10	BRUNDAGE/HAWTHO

NUR 326 Nurse Practitioner Residency: Acute and Chronic Illness Management. ^{DP}			var
103776	01	TBA 10	BRUNDAGE/HAWTHO

NUR 328 Care Management of Patients with Selected Cardiovascular Illnesses. ^{DP}				3
103783	01	TBA	20	HAWTHORNE, M H

NUR 329 Residency in Cardiovascular Advanced Practice Nursing. ^{DP}				var
103790	01	TBA	10	HAWTHORNE, M H

NUR 332 Oncology Nursing II: Symptom and Problem Management. ^{DP}					3
103797	01	MSN 1042	T 1:00-4:00	10	MCINTIRE, A S N

Summer Semester

May 22 - August 16

NUR 334 Clinical Nurse Specialist Residency: Oncology.^{DP}

103804 01 TBA 10 MCINTIRE, A S N 3

NUR 335 Nurse Practitioner Residency: Oncology.^{DP}

103811 01 TBA 30 MCINTIRE, A S N var

NUR 345 Nursing Administration Residency.^{DP}

103818 01 MSN.1046 W 1.00-4.00 35 HAVENS, D S var

NUR 346 Entrepreneurial Ventures in Nursing.^D

103825 01 MSN 1043 M 9.00-12.00 25 MOORE 3
MSN.1043 M 1.00-3.00 25 MOORE

NUR 355 Managing Common Acute and Chronic Health Problems II.^{DP}

103832 01 MSN 1017 W 9.00-12.00 99 HAWTHORN/QUIMET 4
103839 02 MSN 1043 T 1.00-4.00 12 LORIM/BLOOD-SIE

NUR 358 Advanced Physiology.^{DP}

103846 01 MSN 1046 H 9.00-12.00 40 STAFF 3

NUR 359 Management of Diabetes Mellitus in a Primary Care Setting.^{DP}

103853 01 MSN.1042 W 1.00-4.00 20 WILKMAN, M 3

NUR 360 Concepts of Teaching and Learning.^D
103860 01 MSN 1043 H 9.00-12.00 01 MCINTIRE, A S N

NUR 362 Ethics in Nursing.^D

103867 01 MSN 1053 T 3 15-6 15 30 COOPER, C 3

NUR 365 Acute Care Nurse Practitioner Residency.^{ADP}

103874 01 TBA 20 HAWTHORNE, M H var

NUR 375 Nurse Practitioner Residency: Gerontology.^{DP}

103881 01 TBA 30 STAFF var

NUR 383 Clinical Nurse Specialist Practicum: Pediatrics.^{DP}

103888 01 TBA 10 BLOOD-SIEG/LORI 3

NUR 385 Advanced Nursing Care of Children.^{DP}

103895 01 MSN.1043 W 4.00-7.00 25 BLOOD-SIEGFRIED 3

NUR 386 Nurse Practitioner Residency: Pediatrics.^{DP}

103902 01 TBA 10 BLOOD-SIEG/LORI var

NUR 392 Well Child Physical and Developmental Assessment for Family Nurse Practitioners.^{DP}

103909 01 MSN 1046 W 4.00-6.00 50 FRIEDMAN/MESSIC 1

NUR 395 Family Nurse Practitioner Residency.^{DP}

103916 01 TBA 30 FRIEDMAN var

NUR 399 Selected Topics or Independent Study.^{ADP}

103923 01 TBA 10 STAFF 3
103930 02 TBA 10 BRUNDAGE, D B
103937 03 TBA 10 HAWTHORNE, M H
103944 04 TBA 10 HEWITT, D W
103951 05 TBA 10 MCINTIRE, A S N
103958 06 TBA 10 WILKMAN, M
103965 07 TBA 10 CHAMPAGNE, M T
103972 08 TBA 10 WALLSTEN, S
103979 09 TBA 10 OUIMETTE, R M
103986 10 TBA 10 HAVENS, D S
103993 11 TBA 100 BLOOD-SIEGFRIED
104000 12 TBA 10 OEHLER, J M
104007 13 TBA 10 TURNER, B S
104014 14 TBA 10 FRIEDMAN, B J

104021 15 TBA 10
104028 16 TBA 10
104035 17 TBA 10
104042 18 TBA 10
104049 19 TBA 10
104056 20 TBA 10

DENMAN, S
LORIMER
GOODWIN, C
MCCONNELL
MESSICK
PRICE, M

PATHOLOGY

PTH 357 Research in Pathology.^A

105953 01 TBA 10 BIGNER, D D
105960 02 TBA 10 PIZZO, S
105967 04 TBA 10 JENNINGS, R B
105974 05 TBA 10 ADAMS, D O
105981 06 TBA 10 KOEPKE, J A
105988 07 TBA 10 SHELburne, J D
105995 08 TBA 10 PRATT, P C
106002 09 TBA 10 SWENBURG, J A

PTH 362 Autopsy Pathology.^{ADP}

106009 01 TBA 10 STAFF var

PTH 367 Special Topics in Pathology.^D

106016 01 TBA 10 STAFF var

PTH 380 Diagnostic Immunology.^{AD}

106023 01 TBA 40 STAFF var

PHARMACOLOGY

PHR 372 Research in Pharmacology.

105330 01 TBA 10 STAFF var

PUBLIC POLICY STUDIES

PPS 148S Environmental Policy, Summer Internship.^{ALPS}

105358 01 TBA 18 STAFF var var

PPS 152S Administration of Justice, Summer Internship.^{ALPS}

105365 01 TBA 18 STAFF var var

PPS 158S Health Policy, Summer Internship.^{ALPS}

105372 01 TBA 18 STAFF var var

PPS 161S State and Local Public Policy, Summer Intern- ship.^{ALPS}

105379 01 TBA 18 STAFF var var

PPS 168S International Policy, Summer Internship.^{ALPS}

105386 01 TBA 18 STAFF var var

PPS 174S Freedom of the Press and Public Policy, Summer Internship.^{ALPS}

105393 01 TBA 18 STAFF var var

PPS 190 Internship.^{ALPS}

105400 01 TBA 40 STAFF 1 3

RESEARCH

RES 001 RESEARCH

106289 01 TBA 999 STAFF var

ZOOLOGY

ZOO 353 Research.^{ACD}

107283 01 TBA 10 STAFF
107290 08 TBA 10 FORWARD, R B

Course Descriptions for Summer Session 1997

African and African-American Studies (AAS)

124S. Slave Society in Colonial Anglo-America: The West Indies, South Carolina, and Virginia. (CZ) See C-L: History 124S; also C-L: Comparative Area Studies. One course.

Art History (ARH)

69, 70. Introduction to the History of Art. (AL) The history of western architecture, sculpture, and painting in a cultural context. 69: from prehistory to the Renaissance (c. 1400). 70: from the Renaissance to the present. Not open to students who have taken Art 69, 70. One course each.

184. History of Impressionism. (AL) The evolution of the impressionist movement and postimpressionist reactions of the 1880s. Particular attention to the work of Manet, Degas, Monet, Renoir, and Pissarro. Not open to students who have taken Art 184. C-L: Comparative Area Studies. One course.

Asian and African Languages and Literature (AAL)

165S. Modern Arabic Literature in Translation. (AL) Novels and short fiction from Egypt, Lebanon, Sudan, Palestine, North Africa, and the Arabian peninsula. Issues of identity formation in postcolonial societies, gender construction, and representation of conflict. C-L: Comparative Area Studies. One course.

Arabic (ARB)

1, 2. Elementary Arabic. (FL) Understanding, speaking, reading, and writing modern standard Arabic. Language laboratory. One course each.

Biological Anthropology and Anatomy (BAA)

93. Introduction to Biological Anthropology. (NS) Origins and distribution; primate evolution; a survey of human paleontology and human biology, prehistory, and language; and the origins of human social organization and culture. One course.

132. Human Evolution. (NS) Evolutionary biology of the primates. Anatomical and behavioral adaptations and phylogeny of fossils and living primates including *Homo sapiens*. Prerequisites: Biological Anthropology and Anatomy 93 or equivalent. One course.

Biology (BIO)

43D. Ecology and Society. (NS) Ecological concepts and their application to human society. Intended for nonscience majors. One course.

118. Principles of Genetics and Cell Biology I. (NS) Structure and function of genes and proteins in organisms ranging from bacteria to humans. Topics include: physical properties of DNA and chromosomes; protein structure and function; transcription and translation of genetic information; segregation, recombination, and linkage of genes; evolution of genes and proteins; identification and cloning of genes; regulation of gene expression; posttranslational control of protein function; manipulating protein expression and function through genetic engineering. Prerequisites: Biology 25L and Chemistry 12L. One course.

Chemistry (CHM)

11L, 12L. Principles of Chemistry. (NS) The introductory course for students who intend to take additional chemistry courses other than Chemistry 83. 11L: emphasizes stoichiometry and atomic and molecular structures. 12L: emphasizes thermodynamics, chemical kinetics, synthesis, and analysis. Laboratory work includes both qualitative and quantitative analysis. Prerequisites: one year of high school chemistry or consent of instructor; Mathematics 19 or its equivalent; and for 12L: Chemistry 11L. One course each.

151L, 152L. Organic Chemistry. (NS) The structures and reactions of the compounds of carbon. Laboratory: techniques of separation, organic reactions and preparations, and systematic identification of compounds by their spectral and chemical properties. Prerequisite: Chemistry 12L, 23L, or 31S or consent of director of undergraduate studies; for 152L: Chemistry 151L. One course each.

Classical Studies (CS)

11S. Greek Civilization. (CZ) The culture of the ancient Greeks from the Bronze Age to Alexander the Great: art, literature, history, philosophy, and religion. One course.

12S. Roman Civilization. (CZ) The culture of ancient Romans from their beginnings to Constantine: art, literature, history, philosophy, and religion. One course.

70. The Age of Augustus. (CZ) Augustus (63 B. C. -A. D. 14), the person, politician, and genius of a new age. His impact on contemporary historical, biographical, and literary writings, and on the architecture of his new empire, its coinage, and his own portraiture. C-L: History 94. One course.

117. Ancient Myth in Literature. (AL) Myth in classical and medieval writers from Hesiod to Boccaccio. C-L: Medieval and Renaissance Studies. One course.

Computer Science (CPS)

1. Computer Science Fundamentals. (QR) An overview for students not intending to major in computer science. Computer programming, symbolic and numeric computation, electric circuits, architectures, translation, time complexity, noncomputability, and artificial intelligence. Not open to students having credit for Computer Science 6 or higher. Not open to students who have taken Computer Science 10. One course.

4. Introduction to Pascal Programming. (QR) A study of clear thinking and problem solving using the computer. Representation, problem decomposition, and structured programming. Students learn the Pascal language and develop skills by solving a variety of symbolic and numerical problems. Not open to students who have taken Computer Science 50. One course.

6. Introduction to Program Design and Analysis I. (QR) Problem-solving techniques using a computer, top-down decomposition and object-oriented solution methodologies, introduction to programming, programming in the C/C++ language, introduction to UNIX and programming environments, recursion, analysis of execution times, linked data structures, searching, and sorting. Normally the first course for majors in computer science who

have no programming experience. Not open to students who have taken Computer Science 8, 52, or 53. One course.

Cultural Anthropology (CA)

127. Culture and Politics in Japan. (CZ) The intersection between Japanese economic and political institutions and the cultural conventions that establish and challenge Japanese identity in the 1990s. C-L: Comparative Area Studies. One course.

180. Current Issues in Anthropology. (SS) Selected topics in methodology, theory, or area. One course.

180S. Current Issues in Anthropology. (SS) Same as Cultural Anthropology 180 except instruction is provided in seminar format. One course.

Dance (DAN)

75. Theater Production and Management. (AL) Not open to students who have taken Drama 71 or 186. See C-L: Drama 93. One course.

Drama (DRA)

93. Theater Production and Management. (AL) Fundamentals of theater technology and production. Focus is on familiarity with theater spaces and the areas of production (scenery, costumes, lighting, sound, props, and stage management) as well as on a working knowledge of techniques and organizational methods specific to theater. Laboratory requirement. Not open to students who have taken Drama 71 or 186. C-L: Dance 75. One course.

99S. Introduction to Performance. (AL) Storytelling and exploration of the self including: movement, voice, imaginative work, and the basic actor's vocabulary. Scene work. The process of acting will be studied from in-class work and observation of Drama Program productions. Course geared to the student with little or no experience in acting. One course.

Economics (ECO)

1D. National Income and Public Policy. (SS) Basic economic analysis emphasizing current public policy issues. Means of determining the level and rate of growth of aggregate national income and output. Causes of unemployment, inflation, and international payment problems. The effects of monetary policy (money supply and interest rates) and fiscal policy (government expenditures and taxes) on these problems. For freshmen; upperclassmen only by consent of instructor. One course.

2D. Competition, Monopoly, and Welfare. (SS) The composition of output and the distribution of income in a market economy. Role of government. Contemporary problems. Topics such as environmental economics, monopoly, unionism, international trade. Comparison of a market economy with other systems of economic organization. Economic problems of developing countries. Open only to freshmen. One course.

51D. National Income and Public Policy. (SS) For description see Economics 1D. Open to all students. May be taken before or after Economics 2D or 52D. One course.

52D. Competition, Monopoly, and Welfare. (SS) For description see Economics 2D. Open to all students. May be taken before or after Economics 1D or 51D. One course.

83. Financial Accounting and Decision Making. (SS) The accounting model of the firm, transaction analysis, the use of accounting information by management. Topics include procedures to process accounting data, income determination, financial statement analysis, cost behavior, budgeting, and short-run decisions. Not open to students who have taken Management Sciences 53. Does not count for economics major or minor requirements. One course.

139. Introduction to Econometrics. (QR) Data collection, estimation, and hypothesis testing. Use of econometric models for analysis and policy. Prerequisites: Economics 2 or 52, Mathematics 32 or equivalent, and statistics. One course.

149. Microeconomics. (SS) Cost and supply considerations in price theory; the demand for factors of production. The allocation of resources in the context of competitive and monopolistic market structures. Not open to students who have had Public Policy Studies 110. Prerequisites: Economics 2 or 52, and Mathematics 26L or 31 or 31L. One course.

153. Money and Banking. (SS) The evolution and operations of commercial and central banking and nonbanking financial institutions in the United States, the determination of monetary aggregates and interest rates, the financial impacts of Treasury operations, and the linkages from Federal Reserve actions to price level, employment, economic growth, and balance of payments objectives. Prerequisite: Economics 154. One course.

154. Macroeconomics. (SS) Concepts and measurement of national income and expenditures, employment, interest rates, and price levels; the theoretical determination of these aggregates; applications of macroeconomic theory to business cycles and economic growth. Prerequisites: Economics 1 or 51, 2 or 52, and Mathematics 26L or 31 or 31L. One course.

157S. Business Cycles and Economic Forecasting. (SS) Causes of fluctuations in economic activity and conventional methods of forecasting micro- and macroeconomic variables, using microcomputer programs. Forecasting projects by students. Prerequisites: Economics 149, 154, and Statistics 110B. One course.

158. Financial Markets and Investments. (SS) The tools learned in microeconomics, macroeconomics, basic mathematics, and statistics applied to problems in financial economics. A blend of pure economic theory, an investigation of financial data, and practical applications using personal computers. Prerequisites: Economics 149, Economics 154, and a statistics course—preferably Statistics 110B or 210B. One course.

163. Economics of the Environment. (SS) Role of economic methods in evaluating the use and abuse of environmental resources. Focus on characteristics of resources that influence efficient allocation decisions. Current case studies used to develop relevant microeconomics such as natural resource damage assessment, auctions for pollution permits, trade, and the environment. Prerequisite: Economics 52. One course.

165. American International Economic Policy. (SS) Topics include United States trade policies and protectionism, the North American Free Trade area, trade and economic relations with industrialized countries, policies toward developing countries and multilateral institutions, macroeconomic policy coordination, and relations with Europe. Prerequisites: Economics 1 or 51 and 2 or 52, 149. C-L: Public Policy Studies 165. One course.

181. Corporate Finance. (SS) Major corporate decisions from the perspective of the firm with an emphasis on the interaction of the firm with financial markets: project evaluation for investment, choice between borrowing and issuing stock, dividend policy, organizational form (for example, mergers and acquisitions). Introduction to financial markets: issuing stocks, analyzing financial performance, and options. Prerequisites: Economics 1 or 51, 2 or 52; Economics 149 and some statistics recommended. One course.

239. Introduction to Econometrics. (QR) Data collection, estimation, and hypothesis testing. Use of econometric models for analysis and policy. (Same as Economics 139 but requires additional term paper; not open to students who have taken Economics 139.) Prerequisites: Economics 2 or 52 and Mathematics 32 or equivalent and Statistics 110B. One course.

249. Microeconomics. (SS) Cost and supply considerations in price theory; the demand for factors of production. The allocation of resources in the context of competitive and monopolistic market structures. (Similar to Economics 149 but at a more advanced level; not open to students who have taken Economics 149.) One course.

254. Macroeconomics. (SS) Concepts and measurement of national income and expenditures, employment, interest rates, and price levels; the theoretical determination of these aggregates; applications of macroeconomic theory to business cycles and economic growth. (Similar to Economics 154 but at a more advanced level; not open to students who have taken Economics 154.) One course.

258. Financial Markets and Investments. (SS) The tools learned in microeconomics, macroeconomics, basic mathematics, and statistics applied to problems in financial economics. A blend of pure economic theory, an investigation of financial data, and practical applications using personal computers. Not open to students who have had Economics 158. Prerequisites: Economics 149, Economics 154, and a statistics course—preferably Statistics 110 or 210. One course.

Education (EDU)

100. Social and Philosophical Foundations of Education. (SS) Basic features and assumptions, viewpoints, and issues of education in contemporary America. One course.

117S. Psychology of Personal and Social Adjustment. (SS) Principles of mental health affecting individual and social adjustments. One course.

118. Educational Psychology. (SS) Emotional and cognitive learning in children, youth, and adults. One course.

121. Infancy, Early Childhood, and Educational Programs. (SS) Developmental theories and their practical application in education. Emphasis on parenting and teaching. One course.

140. The Psychology of Work. (SS) Factors affecting career choice and change. One course.

149S. Exceptional Children. (SS) Etiology and assessment of major types of exceptionalities, including intellectual abilities, physical or emotional handicaps, and sensorially impaired. Family relationships and treatment programs. One course.

209. Global Education. (SS) A comparative survey of major educational changes and reforms in selected countries designed to illustrate general similarities and differences in the policies of developing and industrialized societies. Emphasis on American educational issues in the context of the emerging global economy. One course.

211. Education and the Mass Media. (SS) Impact of mass media on behavior, particularly of children. One course.

English (ENG)

63S. Introduction to Creative Writing. (AL) One course.

90. Reading Critically: Poetry, Fiction, Drama. (AL) An introduction to the skills of critical reading and the vocabulary of critical analysis by close examination of poetry, fiction, and drama from a range of historical periods. A handbook or comparable guide to critical terms will be assigned. One course.

90S. Reading Critically: Poetry, Fiction, Drama. (AL) A seminar version of English 90. One course.

101B. Introduction to Cultural Studies. (AL) Basic theoretical approaches to high and low culture—Bourdieu and Adorno, the Frankfurt School and the Birmingham Center for Contemporary Cultural Studies; Third World and feminist approaches; the avant-garde and subcultural resistance. Analysis of sport and leisure, film and photography, law and the arts, popular and classical music, painting, and advertising imagery. C-L: Film and Video and Literature 100. One course.

117A, S. Advanced Composition I. See C-L: University Writing Course 117S. One course.

125. English Literature of the Romantic Period. (AL) Wordsworth, Coleridge, Byron, Shelley, Keats. One course.

127. British Literature: 1900 to 1945. (AL) Principal writers of fiction, drama, and poetry such as Yeats, Conrad, Shaw, Joyce, Lawrence, Woolf, Eliot, Auden, and others. One course.

136. Eighteenth-Century British Novel. (AL) Defoe, Richardson, Fielding, Smollett, and Sterne; the Gothic novel. One course.

137. Nineteenth-Century British Novel. (AL) Scott, Austen, Dickens, Thackeray, Trollope, the Brontës, George Eliot, Meredith, Butler, Hardy, and others. Not open to students who have taken English 132A. One course.

139S. Special Topics in British Literature. (AL)

A. Can be counted as a pre-1800 British literature course for the English major requirements.

B. Can be counted as a pre-1900 British literature course for the English major requirements but not as a pre-1800 British literature course.

C. Does not count toward the pre-1800 or pre-1900 British literature English major requirements.

One course.

154. American Literature: 1915 to 1960. (AL) Eliot, Fitzgerald, Hemingway, Faulkner, and others. Not open to students who have taken English 52. One course.

169S. Special Topics in American Literature. (AL) One course.

179S. Special Topics in a Literary Genre. (AL) One course.

275. American Literature since 1915. (AL) Selected topics. One course.

French (FR)

1-2. Elementary French. (FL) Understanding, speaking, reading, and writing French. Language laboratory for recording-listening practice. Two courses.

63. Intermediate French. (FL) Grammar review, reading, and oral practice, including laboratory experience. Prerequisite: French 2, 12, or achievement or placement test score of 450-540. One course.

76. Advanced Intermediate French. (FL) Oral practice, reading, composition. Prerequisite: French 63 or achievement or placement test score of 550-590. One course.

Geology (GEO)

41. The Dynamic Earth. (NS) Dynamic systems studied include volcanoes, earthquakes, sea-floor spreading, plate tectonics; surficial processes such as floods, glaciers, landslides, and related phenomena; and the composition of the earth including rocks and minerals. One course.

German (GER)

1-2. First-Year German: Introduction to German Language and Culture. (FL) Four-skill (understanding, speaking, reading, writing) communicative approach to the language of everyday life in German-speaking countries, the language of their histories and societies, their arts and letters. Resources include audio, video, and computer-based materials. Two courses.

14. Intensive German. (FL) Accelerated introduction to German, combining in one semester the work of German 1-2. Classroom theory and practice with extended exposure to language laboratory and computer programmed instruction. Consent of director of undergraduate studies required. Two courses.

69. Accelerated Intermediate German. (FL) Emphasis on utilizing grammatical structures in meaningful contexts, further development of reading, listening, speaking, and writing skills. Written texts provide material for additional insight into German culture. Students desiring in-depth grammar explanations should consider taking German 65-66 (Intermediate German) instead. One course.

Greek (GRK)

14S. Intensive Elementary Greek. (FL) Introduction to the grammar, offered only in the summer; combining the work of Greek 1 and 2 in one course. Two courses.

15S. Intensive Intermediate Greek. (FL) Combining the work of Greek 63 and 64 in one course, offered only in the summer; selected readings in prose and poetry. Two courses.

Health, Physical Education, and Recreation (PE)

- 11. Cardiorespiratory Conditioning.** Individualized programs in walking, jogging, running, cycling, and swimming. Half course.
- 15. Weight Training.** Progressive, cumulative, and measurable physical conditioning. Half course.
- 17. Mountain Biking.** Individualized programs in mountain biking including bike maintenance, safety tips, single- and multi-track riding. Half course.
- 23. Water Aerobics.** Aerobic and anaerobic exercise performed in water, designed to promote physical conditioning. Half course.
- 40. Beginning Tennis.** Half course.
- 41. Intermediate Tennis.** Strategy of the game and stroke development. Half course.
- 120. Theory and Practice of Coaching.** Fundamentals, strategies, and psychology of coaching. Emphasis on basketball, and track and field. Additional topics such as safety and liability, gender equity, the media, regulations, and ethics. One course.
- 170. History and Issues of Sports.** Sports from ancient to modern times with an emphasis on sports in America. Not open to students who have taken this course as Health, Physical Education, and Recreation 49S. One course.
- 172. Administration in Sports Management.** Philosophy, financial structure, administrative structure, fundraising, NCAA legislation, personnel decision, and scheduling events. One course.

History (HST)

- 29. Comparative Revolutions: France, 1789–Russia, 1917. (CZ)** An introductory investigation into the general significance of political revolutions in the modern Western world. Focuses on two classic case studies: the French and Russian revolutions. Compares origins, development, and consequences of these influential historical transformations. Secondary comparisons with the American Revolution. One course.
- 92. America from 1877 to the Present. (CZ)** A general introduction to American history from the end of Reconstruction to the present. The impact of industrialization, immigration, urbanization, and the rise of mass culture in the U. S.; the effect of depressions and wars on American society and politics; and the roots and results of reform movements ranging from populism and progressivism to the civil rights, women's, and environmental movements. Ongoing debates about the government's proper economic and social role; changing views of ethnicity, race, and gender in America, and the determinants of United States foreign policy. One course.
- 94. The Age of Augustus. (CZ)** Does not count for introductory course requirements. See C-L: Classical Studies 70. One course.
- 101C. Terrorism, 1848-1968. (CZ)** A comparative analysis of the origins and development of modern terrorism in the West (Europe, Russia, and the United States). C-L: Comparative Area Studies. One course.

103, 104. Lectures in Special Topics. (CZ) Individual courses in this series may be taught more than once or on a one time basis. One course each.

110. History of Eastern Europe in Modern Times. (CZ) The development of the nations and nationalities of Eastern Europe since the early eighteenth century. C-L: Comparative Area Studies. One course.

120. History of Socialism and Communism. (CZ) The origins and development of socialist and communist movements from pre-Marxian times to the present. Not open to students who have taken History 239. C-L: Comparative Area Studies. One course.

123S. Madness and Society in Historical Perspective. (SS) Mental illness and psychiatric treatment from antiquity to the present with special concentration on the nineteenth and twentieth centuries in Europe, America, and Russia. C-L: Comparative Area Studies. One course.

124S. Slave Society in Colonial Anglo-America: The West Indies, South Carolina, and Virginia. (CZ) The development of slave-based societies and the production of staple crops for export. C-L: African and African-American Studies 124S and Comparative Area Studies. One course.

160. The United States from the New Deal to the Present. (CZ) C-L: Women's Studies. One course.

195S, 196S. Junior-Senior Seminars in Special Topics. (CZ) Opportunities for juniors and seniors to research and write about a specific historical question. Topics are numerous and vary each semester. Most seminars are offered for one semester and carry one course credit; some seminars are offered for year-long study and carry two course credits. If students wish to enroll in only one semester of a year-long seminar, they must obtain permission from the instructor. Both history majors and nonmajors may enroll in the seminars during their junior or senior years. Students are urged to enroll in their junior year if they expect to apply for the Senior Honors Seminar (History 197S-198S) or to practice-teach in their senior year. One course each.

239. History of Socialism and Communism. (CZ) The origins and development of socialist and communist movements from pre-Marxian times to the present. Not open to students who have taken History 120. C-L: Comparative Area Studies. One course.

299S. Special Topics. (CZ) Seminars in advanced topics, designed for seniors and graduate students. Some semesters open to seniors and graduate students; some semesters limited to graduate students only. One course.

Italian (IT)

1-2. Elementary Italian. (FL) Understanding, speaking, reading, and writing Italian. Language laboratory available for recording-listening practice. Two course.

Latin (LAT)

14S. Intensive Elementary Latin. (FL) Introduction to the grammar, offered only in the summer; combining the work of Latin 1 and 2 in one course. Two courses.

15S. Intensive Intermediate Latin. (FL) Combining the work of Latin 63 and 64 in one course, offered only in the summer; selected readings in prose and poetry. Two courses.

Literature (LIT)

20S. Introduction to Literature. (AL) Introduction to the study of literature and other forms of cultural expression, such as film. Different introductory approaches will be used in each section (for example, a systematic account of literary genres, a historical survey of ideas and forms of fiction, concepts of authorship and subjectivity, or of literary meaning and interpretation). More than one national literature or culture represented. One course.

96. Contemporary Literary and Cultural Theory: An Introduction. (AL) The major concepts and principles of contemporary literary theory. "Poststructural" approaches to language and textuality, the invention of "postmodernism," and theories of history and literature. Vocabulary and tools necessary for reading and understanding contemporary critical and theoretical texts. One course.

100. Introduction to Cultural Studies. (AL) See C-L: English 101B; also C-L: Film and Video. One course.

123. Special Topics in Women Writers. (AL) Issues of gender and representation in works by women from the Middle Ages to the modern period. Concentration on specific periods, areas, or themes. Relationship of women's literature to the other arts, political practices, and social developments. C-L: Women's Studies. One course.

Management Sciences (MS)

120. Managerial Effectiveness. Understanding the nature of management and the factors that influence the effective performance of managers. Topics include the nature of managerial effectiveness; managing groups; leadership strategies; performance motivation and appraisal; conflict management; the manager as decision maker and negotiator. Prerequisite: junior standing. One course.

161. Marketing Management. The role of the marketing function in business; product planning, price, promotion, and distribution as elements of a total marketing mix. Formal models in solving the marketing mix problem of the firm. Prerequisite: junior standing. One course.

Mathematics (MTH)

19. Precalculus Mathematics. (QR) For students with CB Achievement Test scores between 460 and 540 or SAT scores between 500 and 600. Selected topics in algebra, trigonometry, and analytic geometry; projects and writing assignments. Designed to increase the mathematical skills and knowledge of students planning to enroll in Mathematics 31. Not open to students who have credit for Mathematics 25L or 26L. One course.

25L. Laboratory Calculus and Functions I. (QR) A study of functions with applications, and an introduction to differential calculus, with a laboratory component. Topics include a review of algebra and functions, mathematical modeling with elementary functions, rates of change, inverse functions, logarithms and exponential functions, the derivative, differential equations, and Euler's method. Not open to students who have credit for Mathematics 19 or 31 or 31L. One course.

31L. Laboratory Calculus I. (QR) Introductory calculus with a computer laboratory component. Emphasis on projects, group work, and written reports. Differentiation, transcendental functions, differential equations, numerical approximations. Not open to students who have credit for Mathematics 25L or 26L. One course.

32. Introductory Calculus II. (QR) Transcendental functions, techniques and applications of integration, indeterminate forms, improper integrals, infinite series. Not open to students who have had Mathematics 32L or 41. Prerequisite: Mathematics 31. One course.

32L. Laboratory Calculus II. (QR) Second semester of introductory calculus with a computer laboratory. Emphasis on projects, group work, and written reports. Integration, the fundamental theorem, methods of integration, improper integrals, polynomial approximation. Not open to students who have had Mathematics 32 or 41. Prerequisite: Mathematics 26L or 31L or consent of instructor. One course.

103. Intermediate Calculus. (QR) Partial differentiation, multiple integrals, and topics in differential and integral vector calculus, including Green's theorem, the divergence theorem, and Stokes's theorem. Prerequisite: Mathematics 32, 32L, or 41. One course.

104. Linear Algebra and Applications. (QR) Systems of linear equations and elementary row operations, Euclidean n -space and subspaces, linear transformations and matrix representations, Gram-Schmidt orthogonalization process, determinants, eigenvectors and eigenvalues; applications. Prerequisite: Mathematics 32 or 41. One course.

New Testament (NT)

103-104. Hellenistic Greek. Designed for beginners to enable them to read the Greek New Testament. (Two semesters: no credit will be given for 103 without completion of 104; however, students with at least one full year of college Greek may be permitted to enrolling 104.) Two courses.

Philosophy (PHL)

41. Introduction to Philosophy. (CZ) Examination of problems in philosophy; emphasis on metaphysics and theory of knowledge. One course.

43S. Introduction to Philosophy. (CZ) Philosophy 41 conducted as a seminar. One course.

48. Logic. (CZ) The conditions of effective thinking and clear communication. Examination of the basic principles of deductive reasoning. One course.

112. Philosophy of Mind. (CZ) Such topics as mind and body, the nature of thought, perception, consciousness, personal identity, and other minds. The relevance of cognitive psychology, neuroscience, and computer science to the philosophy of mind. One course.

196S, 197S, 198S, 199S. Seminars in Philosophy. (CZ) One course each.

Physics (PHY)

53L, 54L. General Physics. (NS) A survey of the principles of physics, intended mainly for students planning study in medicine or the life sciences. The level and coverage are similar to that of Physics 51L, 52L, but there are differences in emphasis. Physics 53L is closed to students having credit for Physics 41L or Physics 51L; Physics 54L is closed to students having credit for Physics 42L or Physics 52L. Prerequisite: Mathematics 31, 32 or equiva-

lent; Mathematics 32 may be taken concurrently with Physics 53L; for 54L: Physics 51L or 53L. One course each.

55. Introduction to Astronomy. (NS) The evolving theory of the physical universe. Cosmological models, galaxies, stars, interstellar matter, the solar system, and experimental techniques and results. Several observatory sessions. One course.

Polish (POL)

14. Intensive Elementary Polish. (FL) Polish 1 and 2 combined in one semester. Two meetings daily. Required recording-listening practice in the language laboratory. Work on understanding, speaking, reading, and writing. Survey of main elements of grammar. No preliminary knowledge of Polish necessary. Two courses.

Political Science (PS)

91. The American Political System (A). (SS) Theory and practice of American government and politics; federal-state relations; the separation and interrelationships of the executive, legislative, and judicial branches of government; judicial review; the role of political parties and public opinion; the formulation and execution of domestic and foreign policy; civil liberties. One course.

92. Comparative Politics (B). (SS) Different types of political systems, their origins and evolution; basis of authority under totalitarian, authoritarian, liberal, and social democratic polities; problems in developing political authority, especially in poor countries via revolution, populism, nationalism, or authoritarianism. C-L: Comparative Area Studies. One course.

93. Elements of International Relations (D). (SS) The nature of international politics, the analysis of national power, the instruments of foreign policy, and the controls of state behavior. One course.

113A. Issues of International Political Economy I: International Trade (D). (SS) An examination of international trade policy issues affecting relations among advanced industrial countries, between developed and developing countries, and between industrial and former socialist transitional economies, including the benefits of trade and the sources of trade protection, strategic trade policy, and new problems in trade diplomacy such as environmental and worker standards. Not open to students who have taken Political Science 113. One course.

115. Politics and Society in Germany (B). (SS) Industrialization, democratization, and fascism in Germany; social structure, political institutions, and political culture; selected public policies; Germany in the world economy and in world politics. C-L: Comparative Area Studies. One course.

151. Introduction to Latin American Politics (B). (SS) Historical and cultural context of political institutions and behavior, the role of traditional and emerging groups and forces, political instability and the decision-making process. C-L: Comparative Area Studies. One course.

Psychology (PSY)

11. Introductory Psychology (G). (SS) Biological bases of behavior, psychological development, cognitive psychology, personality, abnormal behavior, and social psychology. Designed as a broad introduction to psychology for nonmajors as well as majors; not required for the major. Students are expected to participate as subjects in three to six hours of psychological research. One course.

91. Biological Bases of Behavior: Introduction and Survey (B). (NS) Physiological, developmental, and evolutionary approaches to behavior. Sensory and cognitive processes, sleep, pain, emotion, hunger, and thirst as well as maternal and sexual behavior patterns. Students required to participate as subjects in three to six hours of psychological research if not done in a previous introductory class. Not open to students who have taken Psychology 103. Prerequisite: Biology 19 or Biology 25L; may be taken concurrently. One course.

92. Cognitive Psychology: Introduction and Survey (C). (SS) Overview of cognitive processes including pattern recognition, concept formation, attention, memory, imagery, language, problem solving, and thinking. Emphasis both empirical and theoretical. Students required to participate as subjects in three to six hours of psychological research if not done in a previous introductory class. Not open to students who have taken Psychology 107. One course.

97. Developmental Psychology: Introduction and Survey (D). (SS) Theory and research on growth and behavior from infancy to adolescence. Students required to participate as subjects in three to six hours of psychological research. Not open to students who have taken Psychology 105. One course.

99. Personality and Social Behavior: Introduction and Survey (P). (SS) The determinants of socially significant human behavior—those residing in the person, those that are the product of interpersonal context, and those resulting from the interaction of both sources. Formative as well as contemporary influences considered. Students participate in three to six hours of psychological research if not done in a previous introductory class. Not open to students who have taken Psychology 108. One course.

106. The Psychology of Women (P). (SS) The psychology of women in this country: development, including sex differences, separation and individuation, and achievement; sexuality; sex-roles; mental health problems particularly salient to women; cultural influences on female development; and views within the field of psychology about women. C-L: Women's Studies. One course.

111. Learning and Adaptive Behavior (B, C). (NS) Principles of instrumental learning in animals and humans. Prerequisite: none, but some knowledge of quantitative science desirable. One course.

114. Personality (P). (SS) Representative theories of personality from Freud to the present, emphasizing problems of normal personality structure, dynamics, development, and assessment. One course.

116. Social Psychology (P). (SS) Problems, concepts, and methods in the study of social interaction and interpersonal influence. C-L: Sociology 106 and Women's Studies. One course.

117. Statistical Methods (G). (QR) Elementary statistical techniques and their application to the analysis and interpretation of social science data. Theory of inference is stressed. C-L: Sociology 133. One course.

119A. Abnormal Psychology (P). (SS) Disordered behavior and constructive personality change viewed in interpersonal and social context for purposes of understanding normal and abnormal personality development and functioning. One course.

119B. Child Clinical Psychology (D, P). (SS) Theories of clinical intervention with children and families, evaluation of therapy and epidemiological data. Prerequisite: Psychology 97 or 99. One course.

137. Adolescence (D). (SS) Adolescent development, including identity formation, intelligence, sexuality, peer and parent relationships, vocational choices, drugs, and psychopathology. Theory and empirical findings. One course.

170S, A-R, U-Z. Selected Problems. New courses not yet in the bulletin are designated as 170S or 270S depending on their level. Since all faculty offer these courses, their contents vary accordingly. Different courses indicated by the letter. One course.

Public Policy Studies (PPS)

81. Essentials of Public Speaking. Basics of and practice in oral presentations, with particular attention to the gathering and organization of speech materials. Preference given to freshmen and sophomores. Does not apply toward public policy studies major. Consent of instructor required. One course.

82. Essentials of Public Speaking. Similar to Public Policy Studies 81, but for juniors and seniors. Not open to students who have taken Drama 81 or 82, or Public Policy Studies 81. Does not apply toward public policy studies major. One course.

165. American International Economic Policy. (SS) Prerequisites: Economics 1 or 51 and 2 or 52. See C-L: Economics 165. One course.

Religion (REL)

42. Islam. (CZ) Introduction to Islam in history and modern times. One course.

45. Religions of Asia. (CZ) Problems and methods in the study of religion, followed by a survey of the historical development, beliefs, practices, and contemporary significance of the Islamic religion and religions of south and east Asia. Not open to students who have taken Religion 57. C-L: Comparative Area Studies. One course.

102. The New Testament (CZ) Origins, development, and content of thought. Not open to students who have taken Religion 52. One course.

148. Alternative Religion in America. (CZ) Focus on both the historical development of particular traditions (for example, Mormon, Adventist, New Age) and general themes in American religious life (for example, relationship between religion and health, appeal of communitarian and millenarian movements). One course.

185. Special Topics in Religion. Topics vary from semester to semester. One course.

186. The Theology and Fiction of C. S. Lewis. (AL, CZ) A study of texts of cultural criticism, fantasy fiction, and theological and moral argument by C. S. Lewis, their dependence on the cultural situation in which they were deployed, and the reasons for their continuing force and wide appeal. One course.

Russian (RUS)

14. Intensive Russian. (FL) Russian 1 and 2 combined in one semester. Two meetings daily, as well as daily computer and language laboratory work. Two courses.

70. Intensive Intermediate Russian. (FL) Russian 63 and 64 combined. Two meetings daily, as well as daily computer and language laboratory work. Two courses.

110. Intensive Russian Composition and Readings. (AL, FL) Russian 101S and 102S combined in one course. Two meetings daily, as well as daily language laboratory work. Two courses.

187. Intensive Advanced Russian. (FL) Advanced grammar review with an emphasis on the refinement of oral and written language skills. Development of writing style through compositions and essays. Prerequisite: Russian 102S or consent of instructor. Two courses.

209. Intensive Advanced Stylistics. (AL, FL) Refinement of stylistic control and range in spoken and written Russian. Emphasis on fluent discursive skills, as well as development of expository prose style. Prerequisites: Russian 195 and 196, or consent of instructor. Two courses.

Serbian and Croatian (SCR)

14. Intensive Elementary Serbian and Croatian. (FL) Serbian and Croatian 1 and 2 combined in one semester. Two meetings daily. Required recording-listening practice in the language laboratory. Work on understanding, speaking, reading, and writing. Survey of main elements of grammar. No preliminary knowledge of Serbian and Croatian necessary. Two courses.

Sociology (SOC)

10D. Introduction to Sociology. (SS) Structure and dynamics of groups, organizations, and institutions; social behavior over the life cycle; social control and deviance; population and social ecology; formation and change of societies. Two lectures and one discussion section. One course.

106. Social Psychology. (SS) See C-L: Psychology 116; also C-L: Women's Studies. One course.

133. Statistical Methods. (QR) Elementary statistical techniques and their application to the analysis and interpretation of social science data. Theory of inference is stressed. C-L: Psychology 117. One course.

141. Consuming Passions. (SS) Consumption as the appropriation of meaning to express individual and collective identity, social forces leading to the rise of societies organized around consumption, global diffusion of consumer culture, social dynamics of change in consumption (for example, fashion), and social constraints on consumption (for example, environmentalism). One course.

150. The Changing American Family. (SS) Structure, organization, and social psychology of marital, parental, and sibling relations over the life cycle of a family; courtship, marriage, family dissolution in relation to contemporary American society; deviations from and alternatives to the traditional nuclear family. C-L: Women's Studies. One course.

155. Organizations and Management. (SS) Forms of work organization (corporations, government agencies), the social forces shaping them (management styles, technology, government policy, labor markets), and their effects on employees (productivity, work satisfaction, turnover). C-L: Women's Studies. One course.

Spanish (SP)

1-2. Elementary Spanish. (FL) Understanding, speaking, reading, and writing Spanish. Language laboratory available for recording-listening practice. Two courses.

63. Intermediate Spanish. (FL) Grammar review, reading, and oral practice, including laboratory experience. Prerequisite: Spanish 2, 12, or achievement or placement test score of 500-570. One course.

76. Advanced Intermediate Spanish. (FL) Oral practice, reading, composition. Prerequisite: Spanish 63 or achievement or placement test score of 500-570. One course.

101. Advanced Composition and Conversation. (FL) The refinement of written and oral expression through the analysis of literary texts. Continued development of vocabulary and the study of grammar in context. One course.



Statistics (STA)

110A. Statistics and Data Analysis in the Social Sciences. (QR) Descriptive statistics. Probability and its role in statistical inference. Confidence intervals. Tests of significance. Introduction to linear regression modeling. Not open to students who have had Mathematics 136 or Statistics 110B, 112, 113, 114, 210A, 210B, or 213. One course.

University Writing Course (UWC)

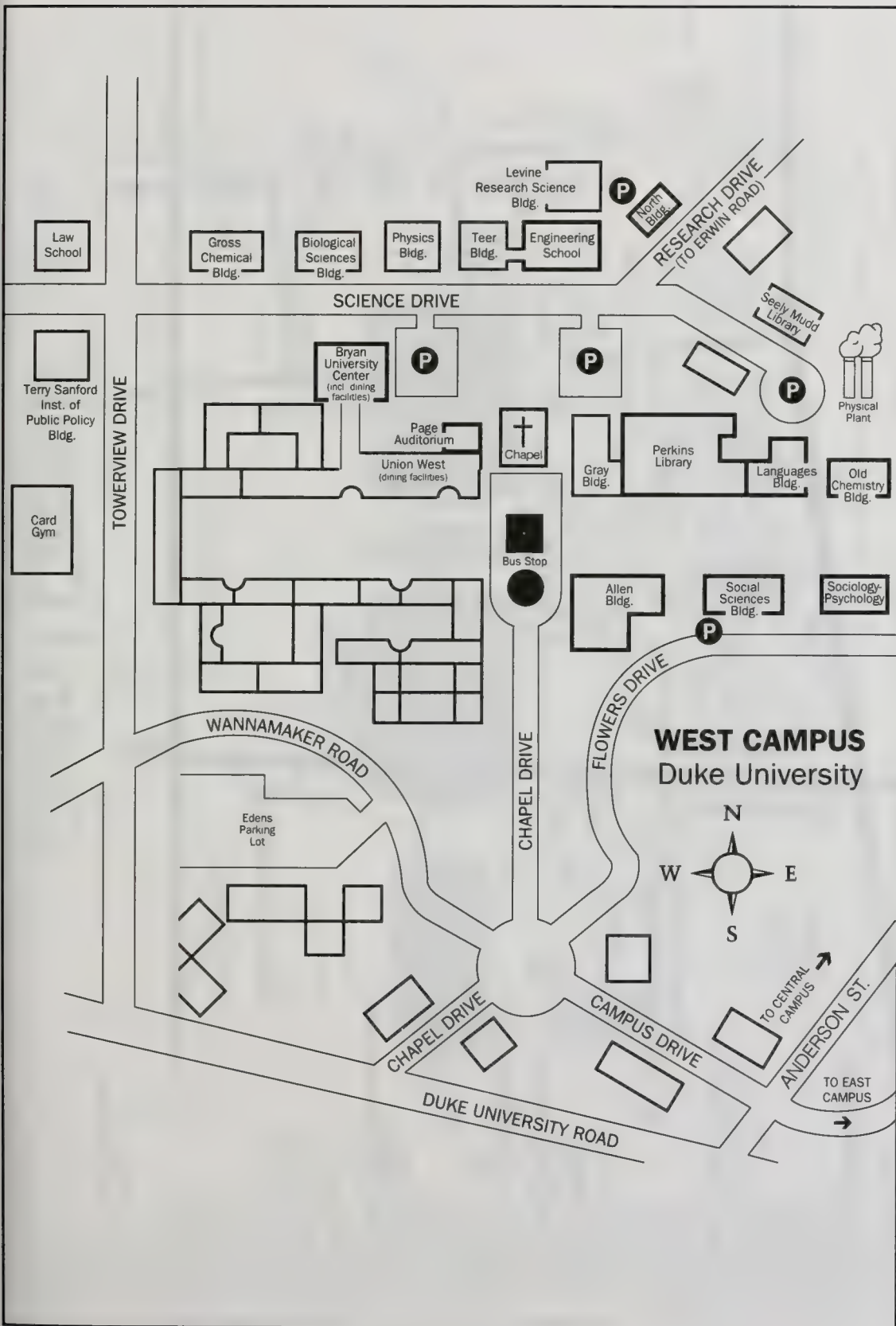
117S. Advanced Composition I. Emphasis on the connections between substance and structure; revision techniques and inventional procedures. Tailored to the level, needs, and interests of students who enroll. Prerequisite: previous University Writing Course or consent of the director of the Writing Across the University Program. C-L: English 117A. One course.

Women's Studies (WST)

60. Gender, Social Policy, and Politics. (SS) A study of the social context of gender roles and the varying political perspectives used to analyze them. Emphasis on contemporary issues and proposed policy solutions to them. One course.

103. An Introduction to Women's Studies. (SS) A course about women, gender, and feminist theories in the United States, using a variety of disciplinary approaches to analyze women's experiences, the women's movement, and women's studies. One course.

Course synopses for many of these courses may be examined on the World Wide Web. Consult <http://www.learnmore.duke.edu>.



1. 2017 Yearby Ave. (Laundry)

2. 1914 Lewis St.

3. 2015 Yearby Ave. (Apartments & Storage)

4. 2011 Yearby Ave.

5. 302 Anderson St.

6. 304 Anderson St.

7. 314 Anderson St.

8. 312 Anderson St.

9. 1923 Yearby Ave. (Maintenance Building)

10. 217 Anderson St. (Laundry & Service Office)

11. 215 Anderson St.

12. 209 Anderson St.

13. 1913 Erwin Rd.

14. 1915 Erwin Rd.

15. 221 Anderson St.

16. 1911 Erwin Rd.

17. 1909 Erwin Rd. (Laundry)

18. 1909 Yearby Ave.

19. 1915 Yearby Ave. (Apartments & Storage)

20. Uncle Harry's

21. 1907 Erwin Rd. (Apartments & Storage)

22. 1901 Erwin Rd.

23. 1905 Erwin Rd.

24. 206 Alexander Ave.

25. 210 Alexander Ave.

26. 1911 Yearby Ave.

27. 218 Alexander Ave. (Apartments,

Computer Cluster, & Housing Management Offices)

28. 1809 Erwin Rd.

29. 204 Alexander Ave.

30. 202 Alexander Ave.

31. 208 Alexander Ave. (Laundry)

32. 220 Alexander Ave.

33. 215 Alexander Ave.

34. 1712 Pace St.

35. 205 Alexander Ave.

36. 209 Alexander Ave.

37. 201 Alexander Ave.

38. 206 Oregon St.

39. 1708 Pace St.

40. 1706 Pace St. (Laundry)

41. 1700 Pace St. (Apartments & Storage)

42. 205 Oregon St.

43. 302 Oregon St.

44. 301 Oregon St.

45. 309 Oregon St. (Restaurant)

46. 502 Oregon St. (Public Safety)

Medical
Center
Parking
Lot

Yearby Ave.

Anderson St.

Erwin Rd.

Lewis St.

Alexander Ave.

Pace St.

Bynum St.

Bynum St.

← West Campus

Duke
Gardens

Campus Dr.

East Campus →

Central Campus

MARKHAM AVENUE

EAST CAMPUS
Duke University

Art Building

Branson Theater

Biddle Music Building

Baldwin Auditorium

Bishop's House/
Summer Session

Pre-Major
Advising Center

East Campus
Union
(dining facilities)

Lilly Library

The Ark
(dance)

East Campus
Store

Duke University
Museum of Art

Carr Building

Epworth House

Bus Stop

Washington
Duke
Statue

West Duke
Building

East Duke
Building

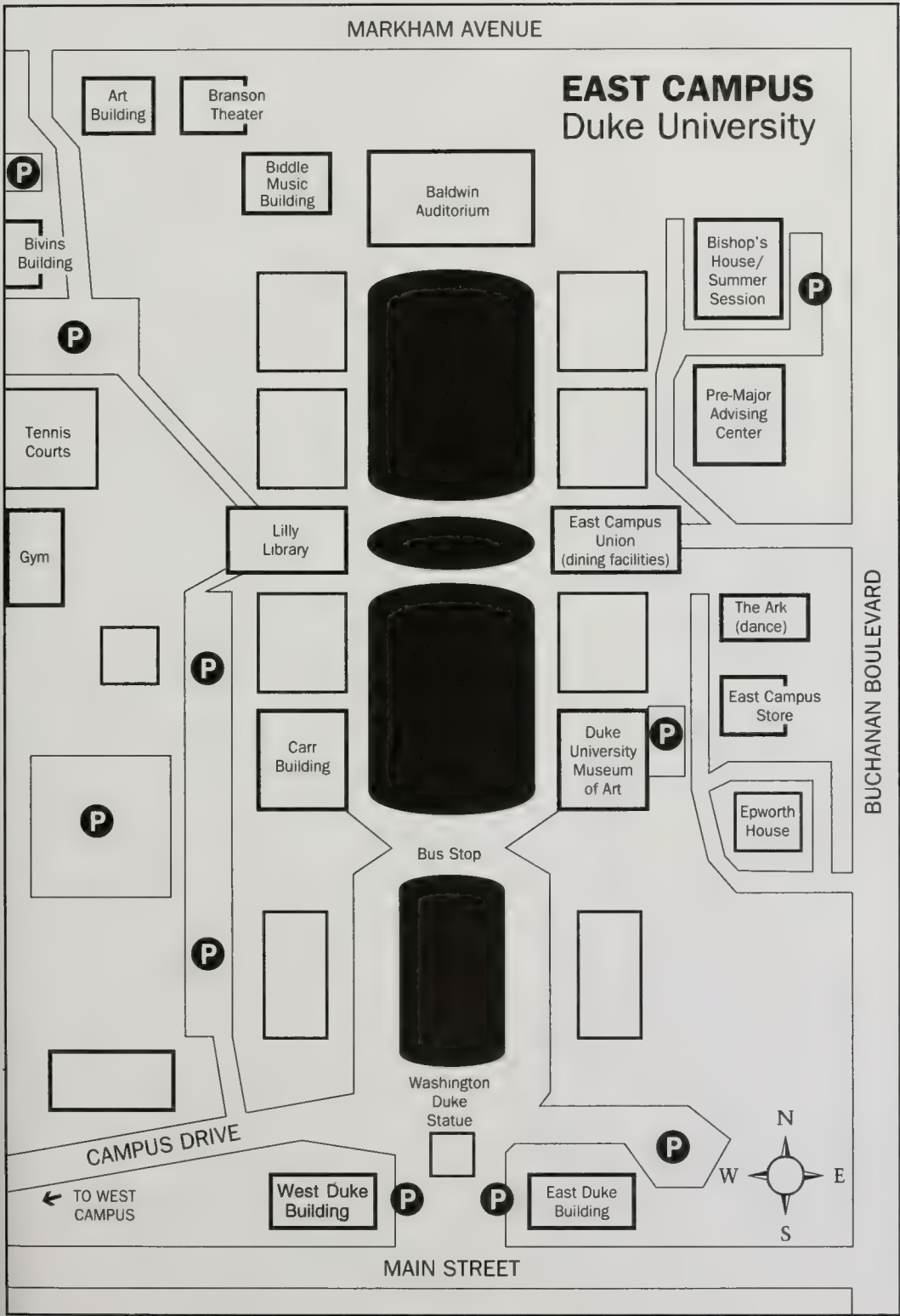
BUCHANAN BOULEVARD



CAMPUS DRIVE

← TO WEST CAMPUS

MAIN STREET



POSTMASTER send this change of address to:

Office of the Summer Session
Box 90059
The Bishop's House
Duke University
Durham, North Carolina 27708

Periodical Rate
PAID
Durham, NC

Term I: May 22 - July 3

Term II: July 7 - August 16

Summer Semester: May 22 - August 16

bulletin of
Duke University
1997-98

Undergraduate Instruction



The Mission of Duke University

The founding Indenture of Duke University directed the members of the university to "develop our resources, increase our wisdom, and promote human happiness."

To these ends, the mission of Duke University is to provide a superior liberal education to undergraduate students, attending not only to their intellectual growth but also to their development as adults committed to high ethical standards and full participation as leaders in their communities; to prepare future members of the learned professions for lives of skilled and ethical service by providing excellent graduate and professional education; to advance the frontiers of knowledge and contribute boldly to the international community of scholarship; to foster health and well-being through medical research and patient care; and to promote a sincere spirit of tolerance, a sense of the obligations and rewards of citizenship, and a commitment to learning, freedom, and truth.

By pursuing these objectives with vision and integrity, Duke University seeks to engage the mind, elevate the spirit, and stimulate the best effort of all who are associated with the university; to contribute in diverse ways to the local community, the state, the nation, and the world; and to attain and maintain a place of real leadership in all that we do.

bulletin of
Duke University
1997-98

Undergraduate Instruction

EDITORS

Martina J. Bryant
Associate Dean
Ellen W. Wittig
Associate Dean

PUBLICATIONS COORDINATOR

Ashley T. Memory

COORDINATING EDITOR

Judy Smith

STAFF SPECIALIST: COURSE CATALOG MASTER

Margaret R. Sims

COVER PHOTOGRAPH

University Photographers

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The information in the bulletin applies to the academic year 1997-98 and is accurate and current, to the best of our knowledge, as of January 1997. The university reserves the right to change programs of study, academic requirements, lecturers, teaching staffs, students' schedules, the announced University calendar, and other matters described in the bulletin without prior notice, in accordance with established procedures.

Duke University does not discriminate on the basis of race, color, national and ethnic origin, handicap, sexual orientation or preference, gender, or age in the administration of educational policies, admission policies, financial aid, employment, or any other university program or activity. It admits qualified students to all the rights, privileges, programs, and activities generally accorded or made available to students. For further information, call the Office of the Vice-President for Institutional Equity, (919) 684-8222. Duke University has adopted procedures for investigation and remedy of complaints involving harassment. See the *Bulletin of Information and Regulations*.

The Bulletin of Duke University, Volume 69, includes the following titles: *The Fuqua School of Business*; *Nicholas School of the Environment*; *Undergraduate Instruction*; *The Graduate School*; *The Medical Center*; *The Divinity School*; *Information for Prospective Students*; *Information for Graduate Studies*; *Summer Session*; *Graduate Program in Nursing*; *The School of Law*; and *Information and Regulations*.

Information that the University is required to make available under the Student Right to Know and Campus Security Acts may be obtained from the Office of University Relations at (919) 684-2823 or in writing at 615 Chapel Drive, Duke University, Durham, North Carolina 27706.

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March 1997

Number 2

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University Calendar—1997-98

Summer 1997*

April		
	2	Wednesday—Registration begins for Term I and/or Term II
May		
	22	Thursday—Term I classes begin
	26	Monday—Drop/Add for Term I ends
June		
	10	Tuesday—Last day to withdraw W/P or W/F from Term I courses
	30	Monday—Term I classes end
July		
	1	Tuesday—Reading period
	2	Wednesday—Term I final examinations begin
	3	Thursday—Term I final examinations end
	7	Monday—Term II classes begin
	9	Wednesday—Drop/Add for Term II ends
	24	Thursday—Last day to withdraw W/P or W/F from Term II courses
August		
	13	Wednesday—Term II classes end
	14	Thursday—Reading period
	15	Friday—Term II final examinations begin
	16	Saturday—Term II final examinations end

Fall 1997

August		
	27	Wednesday—Orientation begins; assemblies for all new undergraduate students
September		
	2	Tuesday, 8:00 A.M.—Fall semester classes begin
	15	Monday—Drop/Add ends
	26-28	Friday-Sunday—Homecoming
	28	Sunday—Founders' Day
October		
	10	Friday, 7:00 P.M.—Fall break begins
	15	Wednesday, 8:00 A.M.—Classes resume
	17	Friday—Last day for reporting midsemester grades
	24-26	Friday-Sunday—Parents' Weekend
	29	Wednesday—Registration begins for spring semester, 1998
November		
	18	Tuesday—Registration ends for spring semester, 1998
	19	Wednesday—Drop/Add begins
	26	Wednesday, 12:40 P.M.—Thanksgiving recess begins
December		
	1	Monday, 8:00 A.M.—Classes resume
	11	Thursday, 7:00 P.M.—Fall semester classes end
	12-14	Friday-Sunday—Reading period
	15	Monday, 9:00 A.M.—Final examinations begin
	20	Saturday, 10:00 P.M.—Final examinations end

* The Nicholas School of the Environment, the Fuqua School of Business, the Marine Laboratory, the Graduate Nursing Program, and Physical Therapy may have different starting dates during the summer; consult the appropriate bulletins and schedules.

Spring 1998

January

- 14 Wednesday—Registration and matriculation of new undergraduate students
- 15 Thursday, 8:00 A.M.—Spring semester classes begin
- 28 Wednesday—Drop / Add ends

February

- 27 Friday—Last day for reporting midsemester grades

March

- 13 Friday, 7:00 P.M.—Spring recess begins
- 23 Monday, 8:00 A.M.—Classes resume

April

- 1 Wednesday—Registration begins for fall semester, 1998, and summer, 1998
- 16 Thursday—Registration ends for fall semester, 1998; summer registration continues
- 17 Friday—Drop / Add begins
- 29 Wednesday, 7:00 P.M.—Spring semester classes end
- 30 Thursday—Reading period begins

May

- 1-3 Friday-Sunday—Reading period continues
- 4 Monday, 9:00 A.M.—Final examinations begin
- 9 Saturday, 10:00 P.M.—Final examinations end
- 15 Friday—Commencement begins
- 17 Sunday—Graduation exercises. Conferring of degrees



University Administration

GENERAL ADMINISTRATION

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Tallman Trask III, Ph.D., *Executive Vice-President*
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N. Allison Haltom, A.B., *Secretary of the University*
William H. Willimon, M.Div., S.T.D., *Dean of the Chapel*

GENERAL ACADEMIC ADMINISTRATION

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David S. Ferriero, M.A., *University Librarian and Vice-Provost for Library Affairs*
Judith Ruderman, Ph.D., *Vice-Provost for Academic Services*
Bruce W. Cunningham, M.E., Ph.D., *Registrar*
Bruce R. Kuniholm, M.A., M.A.P.P.S., Ph.D., *Vice-Provost for Academic and International Affairs*
James S. Roberts, Ph.D., *Vice-Provost for Budgets and Planning*
Lewis M. Siegel, Ph.D., *Vice-Provost for Interdisciplinary Activities and Dean of the Graduate School*
David Jamieson-Drake, Ph.D., *Director of Institutional Research*
Michael J. Mandl, M.A., *Director, Academic Budgets and Analysis*
Stanley Fish, Ph.D., *Associate Vice-Provost and Executive Director of Duke University Press*
Betty Le Compagnon, M.A., M.A., *Vice-Provost for Information Technology*

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James N. Siedow, Ph.D., *Dean of Faculty Development*
Robert F. Barkhau, B.S., *Director of Facilities for Arts and Sciences*
Charles W. Byrd, Ph.D., *Associate Dean for Academic Affairs*
Thomas D. Mann, A.B., *Associate Dean for Administration*
Melissa J. Mills, M.B.A., *Assistant Dean for Computing*
Susan C. Ross, A.B., *Associate Dean for Advancement*
William G. Slebos, B.A., *Assistant Dean for Management Services*

Trinity College

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Lee W. Willard, Ph.D., *Associate Dean for Academic Planning and Special Projects*
Gerald L. Wilson, B.D., Ph.D., *Senior Associate Dean for Administration; Social Sciences and Pre-Law*
Martina J. Bryant, Ed.D., *Associate Dean for Social Sciences and Pre-Business*
Mary Nijhout, Ph.D., *Associate Dean for Natural Sciences and Pre-Graduate School Advisor*
Ellen W. Wittig, Ph.D., *Associate Dean for Humanities*
Paula E. Gilbert, Ph.D., *Assistant Dean for Summer Session and Continuing Education*
Christa T. Johns, Ph.D., *Director of Foreign Academic Programs and Assistant Dean for Study Abroad*
Norman C. Keul, Ph.D., *Assistant Dean for Pre-Majors and Director of the Pre-Major Advising Center*
Caroline L. Lattimore, Ph.D., *Assistant Dean for Social Sciences*
Kay H. Singer, Ph.D., *Assistant Dean for Natural Sciences and Director of Health Professions Advising Center*

School of Engineering

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Marion L. Shepard, Ph.D., *Associate Dean for Academic Affairs*

Student Affairs

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Maureen D. Cullins, A.M., *Assistant Vice-President for Student Affairs and Dean, Campus Community Development*

Suzanne J. Wasiolek, M.H.A., J.D., LL.M., *Assistant Vice-President for Student Affairs*

Barbara Baker, M.A., *Dean of Student Development and Residential Education*

R. James Clack, Ph.D., *Director, Counseling and Psychological Services*

William A. Christmas, M.D., F.A.C.P., *Director of Student Health*

Susan L. Coon, M.A., *Dean of University Life*

Caroline Nisbet, M.A., *Director of Resource Administration*

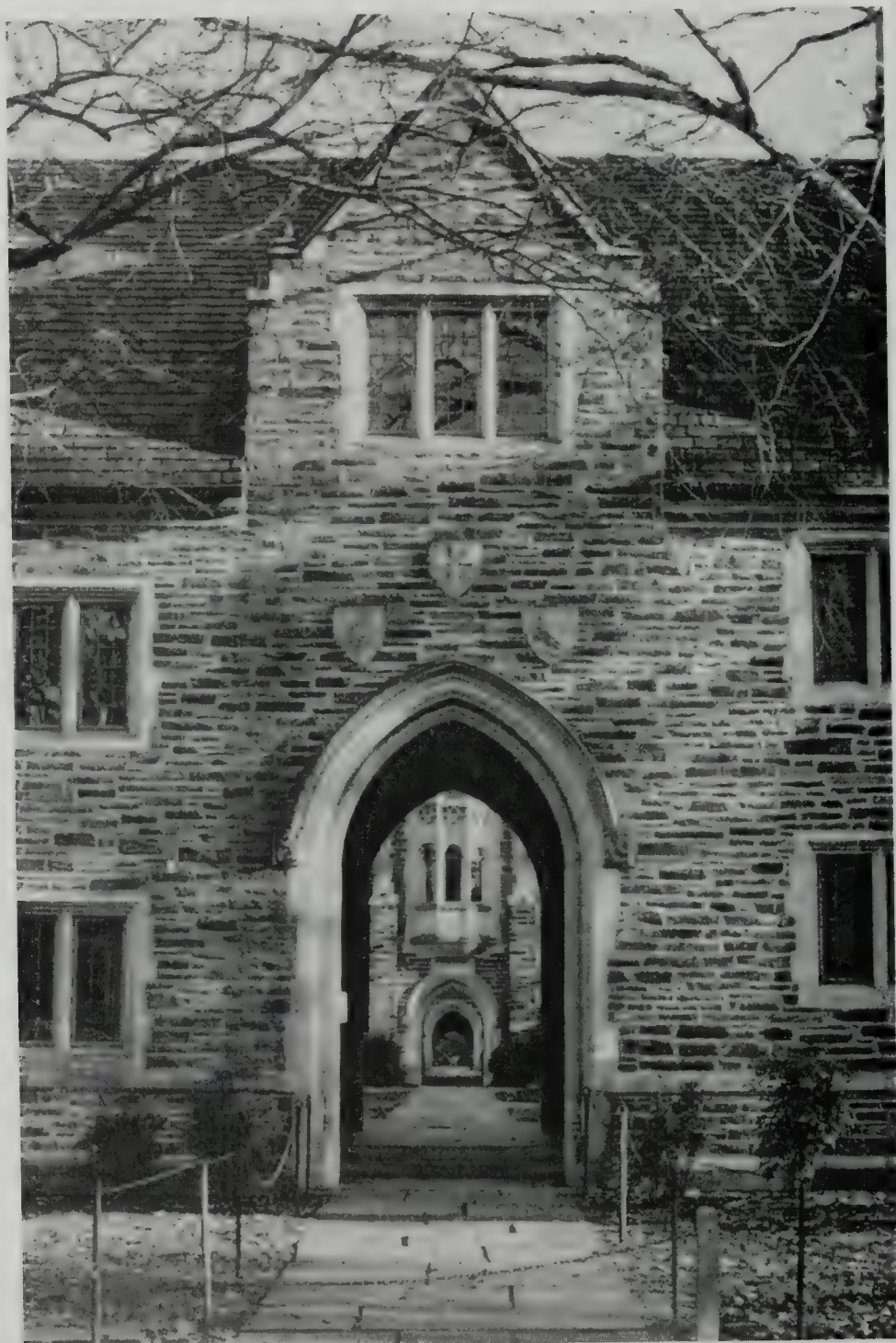
John H. Noble, M.S., *Director, Career Development Center*

Admissions and Financial Aid

Christoph O. Guttentag, M.A., *Director of Undergraduate Admissions*

James A. Belvin, Jr., A.B., *Director of Undergraduate Financial Aid*

General Information



Duke University

In 1839 a group of citizens from Randolph and adjacent counties in North Carolina assembled in a log schoolhouse to organize support for a local academy founded a few months earlier by Brantley York. Prompted, they said, by "no small share of philanthropy and patriotism," they espoused their belief that "ignorance and error are the banes not only of religious but also civil society which rear up an almost impregnable wall between man and happiness." The Union Institute, which they then founded, was reorganized in 1851 as Normal College to train teachers, and again in 1859 as Trinity College, a liberal arts college, which later moved from the fields of Randolph County to the growing city of Durham, North Carolina. Trinity College was selected by James B. Duke as the major recipient of a fortune when, in 1924, he provided endowment funds for the university that would be organized around Trinity College and named for the Duke family.

The old Trinity College had, like almost all institutions in America at the time it was founded, been restricted to men. In 1896, Washington Duke gave an endowment with the condition that women be admitted "on equal footing with men." Thereafter, women were educated in Trinity College, and in 1930 the Woman's College was established as a separate college. Trinity College and the Woman's College continued as coordinate colleges for over forty years. To assure that women were indeed admitted "on equal footing with men," and to recognize that the education which men and women had received at Duke had long taken place in the same classrooms, the university merged these coordinate colleges in 1972 to form Trinity College of Arts and Sciences, the liberal arts undergraduate college of the university. The Bachelor of Arts and Bachelor of Science degrees may be earned in the college.

Instruction in engineering started at Normal College in 1851 and was continued at Trinity College as an option in the arts and sciences program. A Department of Engineering was established at Trinity in 1910. Following the establishment of Duke University in 1924, the Departments of Civil and Electrical Engineering were formed in 1927, and a Department of Mechanical Engineering was added four years later. The three

engineering departments were joined to form the Division of Engineering as a separate administrative unit of the university. In 1939 this division was renamed the College of Engineering, which in 1966 became a professional school of engineering. The Division of Biomedical Engineering was added to the School of Engineering in 1967, and it was recognized as a department in 1971. In 1974, the name of the mechanical engineering department was changed to the Department of Mechanical Engineering and Materials Science; in 1982, the Department of Civil Engineering was renamed the Department of Civil and Environmental Engineering; in 1995, the Department of Electrical Engineering was renamed the Department of Electrical and Computer Engineering. All four departments offer courses leading to Bachelor of Science in Engineering, Master of Science, and Doctor of Philosophy degrees.

The School of Nursing was established in 1931 in association with the School of Medicine and Duke Hospital. From 1944 until 1984, the Bachelor of Science in Nursing Education degree was offered. In 1980, the University Board of Trustees approved the phaseout of the existing undergraduate degree programs. At present, the School of Nursing offers courses leading to the Master of Science in Nursing degree, a program initiated in 1958.

As the university developed around the core of undergraduate colleges and schools, the Graduate School, organized in the 1920s, expanded in areas of instruction and research. It now consists of some fifty-five departments and programs and offers A.M., M.S., M.A.T., M.P.P., and Ph.D. degrees. In 1930, the School of Law of Trinity College was established as a graduate professional school, the Duke University School of Law, and was followed by other professional schools. The Divinity School was organized in 1926 and the School of Medicine in 1930. The School of Forestry which began in 1938 grew into the School of Forestry and Environmental Studies in 1974, was restructured to become the School of the Environment in 1991, and named the Nicholas School of the Environment in 1995. The Graduate School of Business Administration was established in 1969 and renamed the Fuqua School of Business in 1980.

Duke, a privately supported, church-related (Methodist) university, has over 10,000 students enrolled in degree programs. These students represent nearly every state and many foreign countries; Duke has more than 85,000 alumni in all fifty states and in numerous foreign countries. The university is a member of the North Carolina Association of Independent Colleges and Universities, the Southern Association of Colleges and Schools, and the Association of American Universities.

From academy to university, some of the basic principles have remained constant. The Duke University motto, *Eruditio et Religio*, reflects a fundamental faith in the union of knowledge and religion, the advancement of learning, the defense of scholarship, the love of freedom and truth, a spirit of tolerance, and a rendering of the greatest service to the individual, the state, the nation, and the church. Through changing generations of students, the objective has been to encourage individuals to achieve, to the extent of their capacities, an understanding and appreciation of the world in which they live, their relationship to it, their opportunities, and their responsibilities.

Resources of the University

The Faculty. The university faculty, numbering approximately 1,900, maintains a tradition of personal attention to students and devotion to research. Many members of the faculty have been cited for excellence in teaching and are elected to membership in the national societies which honor those best in scholarship and research. Leaders in their disciplines and their professional organizations, they are authors of significant books and articles. Members of the faculty also act as consultants to industry, government, and foundations. To honor its outstanding faculty, the university has established more than one hundred James B. Duke and other named professorships.

The Library System. The libraries of the university consist of the William R. Perkins Library and its seven branches on campus: Biology and Environmental Sciences, Chemistry, Lilly, Engineering, Music, Mathematics-Physics, Special Collections; the Pearse Memorial Library at the Duke Marine Laboratory in Beaufort; and the independently administered libraries of Divinity, Law, Medicine, and Business (Fuqua). As of June 1996, these libraries contained over 4.5 million volumes. The collection includes 10.9 million manuscripts, and over 2,000,000 public documents.

The William R. Perkins Library. The William R. Perkins Library, the main library of the university, houses books, journals, and online resources supporting the humanities and the social sciences, as well as a large collection of United States federal and state documents and public documents of many European and Latin American countries. The library is a depository for U.S., North Carolina, and European Community documents. An international focus is evident throughout the library collections, reflecting the global and interdisciplinary directions of scholarship and teaching as well as the historical strengths of area programs at the university. Included are extensive research collections from and about South Asia, Latin America, Africa, Europe, Russia, and Poland, as well as the country's largest collection of Canadiana. The East Asian Collection offers resources in Japanese, Chinese, and Korean on a variety of topics, predominantly history, politics, literature, and language. The newspaper collection includes many eighteenth-century titles; strong holdings of nineteenth-century New England papers; and antebellum and Civil War papers from North Carolina, South Carolina, Virginia, and Georgia; as well as many European and Latin American papers.

The Special Collections Library holdings range from ancient papyri to records of modern advertising. They number more than 200,000 printed volumes and more than 10.9 million items in manuscript and archival collections. They support research in a wide variety of disciplines and programs, including African-American studies, anthropology, classics, economics, history, literature, political science, religion, sociology, and women's studies. Areas of particular strength in the collections include the history and culture of the American South, English and American literature, history of economic theory, British and American Methodism, and the history of modern advertising.

The Circulation/Reserves Department houses the required reading materials placed on reserve for most graduate and undergraduate courses. The department is phasing in campus online access to reserve readings. The Lilly Library houses the university's principal collections of the visual arts and art history, drama, and philosophy. The Lilly Library is also the location of the Paul B. Williams Multimedia Broadcast Center. This state-of-the-art facility features remote transmission facilities for the campus as well as the film and videocassette collection. The branch libraries serve the academic disciplines bearing their names, as well as provide access to electronic resources available through the online catalog.

The Music Library, located in Room 113 of the Mary Duke Biddle Music Building, and the Music Media Center, located in Room 027 of the same building, are administered as a single branch library within the Perkins Library system. The Music Library contains a rapidly expanding collection of over 100,000 books on music, and music scores, as well as over 200 journals in the field. The Music Media Center has a collection of over 20,000 media items, including compact discs, cassettes, LP recordings, laser discs, and videotapes, plus a collection of over 10,000 microforms, along with various facilities for listening and viewing.

The libraries at Duke, North Carolina Central University, the University of North Carolina at Chapel Hill, and North Carolina State University are connected by a computer network. Members of the Duke community can easily and quickly determine what books and other library materials are held by UNC, NCCU, and NCSU. Through a reciprocal borrowing agreement, faculty and students at Duke may borrow materials from all of these libraries.

Reference librarians are on duty in Perkins Library for most of the hours the library is open. Their primary responsibility is to assist patrons in making the most effective use of information resources including library collections and facilities. In addition to answering specific questions, the reference librarians also help patrons access information by identifying and explaining the use of library sources and by giving formal and informal instruction to groups of students, faculty, or staff. Professional reference service is available to students in all other campus libraries.

Tours of the Perkins Library are given frequently during Orientation Week and upon request throughout the year. Information about other campus libraries may be obtained from the staff in each of the libraries. Handbooks about library services and facilities are also available in each of the libraries.

The library has both facsimile and copying services. The rules with regard to copyright and a schedule of fees for reproduction services are available in the library at the point of service.

The Medical Center Library. The Medical Center Library, located in the Seeley G. Mudd Building, provides the services and collections necessary to further educational, research, and clinical activities in the medical field. Services are available to Medical Center students, faculty, and staff from the School of Medicine, School of Nursing, Division of Allied Health, Duke Hospital; and graduate departments in the basic medical sciences.

Over 277,344 volumes are available, including the Trent Collection in the History of Medicine. Approximately 3,273 journal subscriptions are received currently and the library has extensive back files of older volumes. The collection contains over 1,197 audiovisual items. Audiovisual equipment is available for viewing these materials. The Medical Library Education Center, located on the lower level of the library, houses an electronic classroom for hands-on computer training, as well as an area for using multimedia programs. The Frank Engel Memorial Collection consists of a small group of books on consumer health and nonmedical subjects for general reading, together with several newspapers and popular magazines.

Traditional library services include reference, circulation, Internet assistance, and document delivery services which are supplemented by mediated and self-service online database searching. Public workstations for searching databases and the online card catalog are available in the reference area and other areas of the library. Detailed information on services and resources may be found in the "Library Guide" available at the library.

The School of Law Library. The School of Law Library, with over 490,000 volumes, serves both the university and the local legal community. It features comprehensive coverage of basic Anglo-American primary source materials, including nearly all reported decisions of federal and state courts, as well as current and retrospective collections of federal and state codes and session laws. Digests, legal encyclopedias, and other indexing devices provide access to the primary documents. A large section of the library collection is devoted to treatises on all phases of law, as well as history, economics, government, and other social and behavioral sciences relevant to legal research. The treatises are organized in the Library of Congress classification system and most are accessible through the Duke University online catalog. Special treatise collections are maintained in several subject areas, including the George C. Christie collection in jurisprudence and the Floyd S. Riddick collection of autographed senatorial material. The library is a selective depository for United States government publications, with concentration on congressional and administrative law materials. The library receives the records and briefs from the United States Supreme Court and the North Carolina Supreme Court and Court of Appeals. In addition to its Anglo-American holdings, the library holds substantial research collections in foreign and international law. The foreign law collection is extensive in coverage, with concentrations in European law and business law materials. The international law collection is strong in primary source and

treatise material on both private and public international law topics. Undergraduate and graduate students whose course of study requires access to legal literature may use the library. However, access to the library may be restricted during certain times.

University Archives. The Duke University Archives, the official archival agency of the university, collects, preserves, and administers the records of the university having continuing administrative or historical value. The institutional archives, which also include published material, photographs, records of student groups and faculty, and selected memorabilia, are available for research under controlled conditions in 341 Perkins Library.

The Office of Information Technology. For a contemporary university, extensive computing resources are essential. At Duke, the Office of Information Technology (OIT) is the organization that works in partnership with members of the university community to provide Duke students, faculty, and employees with necessary computing resources.

OIT supports extensive personal computer and Unix workstation services located throughout the campus. There are seven Unix workstation clusters containing Sun computers, located in Engineering, Sociology-Psychology, Carr, Trent, West Duke, and Biological Sciences. These workstations are connected to multiple compute, mail, and file servers. There are eight clusters of PC Windows personal computers, and nine clusters of Macintosh computers spread throughout the campus. All clusters have laser printers and are connected to the campus network (DukeNet). Free e-mail accounts are assigned to all students at Duke by OIT.

DukeNet is a fiber optics, backbone network, available in most campus buildings, that provides access to the Sun Unix System, to the Perkins Library online catalog, and to other computing resources, both at Duke, and nationwide over the Internet network. DukeNet is managed for the university by OIT. All undergraduate dormitory rooms are now wired for DukeNet. DukeNet access is also provided by dialing into terminal servers from a PC with a modem.

Other computing facilities available include supercomputing services on a Cray T-90 supercomputer provided by the North Carolina Supercomputing Center (NCSC).

More specific information regarding Duke computing facilities may be obtained by calling the OIT Help Desk at 684-2200, 9:00 A.M. to 5:00 P.M., Monday through Friday.

Science Laboratories. In addition to the teaching and research laboratories in the departments of natural and social sciences and in the School of Engineering, there are other facilities in which some advanced undergraduates work on individual projects. These include the Duke University Marine Laboratory in Beaufort, North Carolina; the Phytotron of the Southeastern Plant Environment Laboratories, located on the Duke campus; the Duke Forest, adjacent to the campus; the Duke University Primate Center in Duke Forest; the Triangle Universities Nuclear Laboratory; and the Free Electron Laser Laboratory, also on campus. The Levine Science Research Center, which opened recently, houses 341,000 gross square feet consisting of laboratories, office and classroom space for interdisciplinary science research, state-of-the-art teaching laboratories, and shared instrumentation facilities. In particular, undergraduates will have the opportunity to use the expanded laboratory space in the center for research for their own academic work or as assistants to others.

Duke as a Residential University

Duke enjoys a long tradition as a residential university and has sought to provide for undergraduates attractive on-campus housing in both residence halls and apartments. While the university was established to provide a formal educational opportunity for students, Duke has always taken the position that education encompasses social

and personal development as well as spiritual and intellectual growth. Duke seeks to provide a supportive environment substantially anchored in its residential program.

Educational, cultural, recreational, and outdoor adventure programming is planned and presented throughout the year for living groups through the cooperative work of of Student Affairs, Trinity College of Arts and Sciences, the School of Engineering, and resident students. There are a number of faculty members who live in residence halls. Seminar rooms are also located in several houses. The goals of these various programs are to enhance the quality of intellectual and social life for the residents on campus, to facilitate student-faculty interaction outside of the formal classroom setting, and to develop a greater sense of community within the individual residence halls as well as within the greater university.

The Undergraduate College and School

In Trinity College of Arts and Sciences and the School of Engineering, instruction is offered by university faculty who engage in research and in graduate and undergraduate teaching. Duke offers its undergraduates the opportunity to study with many internationally recognized experts in their disciplines and with faculty members who are jointly committed to undergraduate instruction and to the advancement of knowledge. The university recognizes that students learn not only through formal lectures, but also through the interplay of ideas among faculty members and students; thus, it offers undergraduates opportunities to test their ideas against those of their professors and to observe at close range those who have committed their lives to academic careers.

The university, if it is doing its job properly, is educating citizens of the United States and of the world, not only individuals aspiring to personal fulfillment. At Duke, the men and women who earn degrees are likely to become leaders in industry, government, and the professions. They will have influence on and will be influenced by the social fabric of which they are a part. The kind of people they become will matter not only to them and their families, but also to their communities, to the United States, and to the countries of the rest of the world as well.

Amidst changing external conditions, the university must ensure that students acquire the tools and flexibility to prepare them for life-long learning activities.

Trinity College of Arts and Sciences. In Trinity College, the liberal arts are a means through which students explore the world of ideas from art and music to neurosciences and physics. The undergraduate program, rated one of the finest in the country, helps students learn how to deal successfully with the challenges, intellectual and philosophical, that modern life provides. Trinity College is a community of outstanding students and talented, nationally ranked faculty. As members of this community, students learn to ask questions, analyze rationally, challenge ideas, and contribute to the continuing development of knowledge.

The Trinity experience offers a traditional liberal arts base of study and currently offers, within broad limits, exposure to great ideas in six major areas: arts and literatures, civilizations, foreign languages, quantitative reasoning, natural sciences, and social sciences. It offers exposure across a broad spectrum as well, and interdisciplinary and interdepartmental programs stretch horizons even further. Internships and apprenticeships in areas related to students' majors are increasingly available so that practical experience can complement a more formal education. In a world where people are drawn ever closer together, the understanding of cultural difference and diversity becomes increasingly important. Our study abroad programs are varied and plentiful.

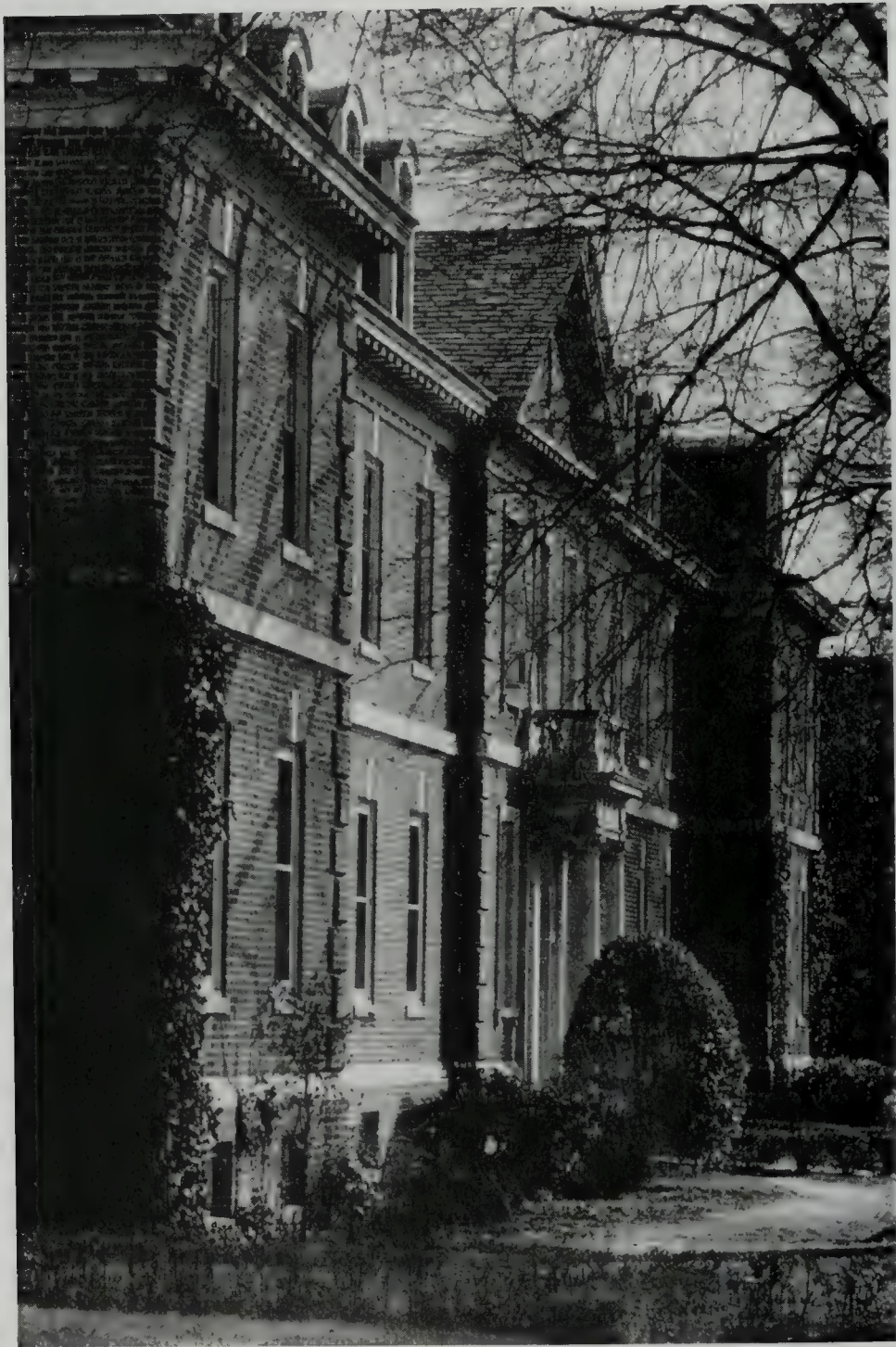
The undergraduate college of arts and sciences is unique in that it is set within a distinguished research university. We believe that this combination provides unparalleled opportunities for interaction with faculty, both inside and outside the classroom. The arts and sciences faculty boasts some of the most highly rated scholar-teachers in the country. They challenge students both to master and to reach beyond the basics of

fundamental knowledge. At Duke there is a genuine concern for learning, and students are prepared by academic challenges and their individual experiences for the critical decision-making required of them for participatory citizenship, full personal lives, and successful careers.

School of Engineering. The undergraduate engineering program at Duke University is designed both for students who intend to become professional engineers and for those who desire a modern, general education based on the problems and the promises of a technological society. The environment in which students are educated is as important in shaping their future as their classroom experiences. In the Duke School of Engineering this environment has two major components: one is modern technology derived from the research and design activities of faculty and students in the school; the other is the liberal arts environment of the total university, with its humanitarian, social, and scientific emphases.

Engineering is not a homogeneous discipline; it requires many special talents. Some faculty members in the School of Engineering are designers; they are goal-oriented, concerned with teaching students how to solve problems—how to synthesize relevant information and ideas and apply them in a creative, feasible design. Other engineering faculty members function more typically as scientists; they are method-oriented, using the techniques of their discipline in their teaching and research to investigate various natural and artificial phenomena.

Degree Programs



Degrees and Academic Credit

Duke University offers in Trinity College of Arts and Sciences the degrees of Bachelor of Arts and Bachelor of Science, and in the School of Engineering the degree of Bachelor of Science in Engineering. Within the curriculum of each college or school, students have the major responsibility for designing and maintaining a course program appropriate to their background and goals. They are assisted by faculty advisors, departmental directors of undergraduate studies, and academic deans.

Credit toward a degree is earned in units called semester courses (s.c.), commonly abbreviated as courses. These courses ordinarily consist of three to four hours of instruction each week of the fall or spring semester or the equivalent total number of hours in a summer term. Double courses, half courses, and quarter courses are also recognized.

Trinity College of Arts and Sciences

A variety of approaches to a liberal education is provided by Program I and II. Either program leads to the Bachelor of Arts or Bachelor of Science degree, and each requires thirty-four semester courses.

PROGRAM I

Program I provides for the experience and achievement that constitute a liberal education. The ability to organize ideas and to communicate them with clarity and precision is refined by completing the writing course and by the requirement for discussion in small groups. Knowledge of a foreign language contributes to an understanding of the nature of language itself and to perspectives on other cultures. Through courses in arts and literatures students learn about the creative products of the human intellect; courses about civilizations ask students to attend to the analysis and evaluation of ideas and events that shape civilizations past and present. Through courses in natural sciences students learn how to interpret and utilize information in an increasingly technological world, while courses in quantitative reasoning help develop skills of inference and analysis. Finally, through courses in the social sciences students learn about the causes of human behavior and about the origins and functions of the social structures in which we operate.

Students must complete the requirements listed below and explained, where necessary, on the following pages. No degree requirements, except the requirement for thirty-four course credits and continuation requirements, may be met by a course passed under a pass/fail option unless the course is offered only on that basis.

Students must accept personal responsibility for understanding and meeting the requirements of the curriculum.

Writing. Students are required to demonstrate ability to write effective English prose by completing a course in expository writing, ordinarily University Writing Course 4, 5, 6, 7, or 8. See the section University Writing Program in the chapter "Courses and Academic Programs."

General Studies consisting of courses in at least five of the following six areas of knowledge:

Arts and Literatures (AL)

Civilizations (CZ)

Foreign Languages (FL)

Natural Sciences (NS)

Quantitative Reasoning (QR)

Social Sciences (SS).

- In four of these areas a student must take three courses; at least one of the three in each area must be at the 100-level.
- In the remaining area a student must take two courses.
- Independent study courses will not count toward these areas.
- Advanced placement credits will not substitute for courses in these areas.
- Courses counting toward requirements in a major (and additional courses taken in the major department) do not count toward more than two of these areas.

The Major consists of the requirements for majors in the department or program in which a student wishes to obtain a bachelor's degree (see below). These requirements are described under the course listing for each department or program.

The Minor. Minors are available although not required. They are described under the course listing for each department or program.

Elective courses. Advanced placement credits may function as elective courses. Other courses that a student is using as electives may or may not carry an area of knowledge designation.

Small Group Learning Experiences.

- During the first year: one of the following: (1) a first-year seminar (49S), (2) a 20-series seminar, (3) a FOCUS program seminar, (4) Engineering 10, or (5) any other course designated as a seminar.
- During the junior and senior years: at least two full courses designated as seminars, tutorials, independent study, or a thesis.

Course credits. There are several separate and specific requirements concerning course credits in Trinity College. Thirty-four (34) courses are required for graduation, not more than two with a grade of D, and including:

- At least twelve (12) courses at or above the 100-level.
- No more than: one credit of physical education activity (i.e., two half-credit activity courses), four credits of dance/American Dance Festival technique/performance (i.e., eight half-credit courses), two credits for house courses (i.e., four half-credit house courses), six from a professional school (e.g., business, engineering, medicine, environment (courses numbered 200 or above), four in military science, and one credit from academic internships.
- The number of advanced placement and transfer credits allowed. (See the sections on advanced placement and transfer of work elsewhere in the chapter "Academic Procedures and Information.")

General Studies (Distribution of Courses). Students achieve breadth and balance of intellectual experience by taking courses in at least five of the six areas of knowledge. Courses that can be taken to satisfy the distribution requirement are identified in the bulletin by a two-letter code (AL, CZ, FL, NS, QR, SS). In four of the areas of knowledge

a student must take at least three courses. At least one of the three courses must be at the 100 or 200 level. In one additional area of knowledge a student is required to take at least two courses. Courses counting toward requirements in a major (and additional courses taken in the major department) do not count toward more than two of these areas.

The Major. Students are expected to acquire some mastery of a particular discipline or interdisciplinary area as well as to achieve a breadth of intellectual experience. They therefore complete a departmental major, a program major, or an interdepartmental major. All majors require a minimum of ten courses, at least eight of which must be at the 100 level or above. The total number of courses that a department/program may require at any level in the major and related departments may not exceed seventeen semester courses for the Bachelor of Arts degree and nineteen semester courses for the Bachelor of Science degree. At least half the courses for a student's major field must be taken at Duke although departments may make exceptions to this rule in special circumstances. Students are responsible for meeting the requirements of a major as stated in the bulletin for the year in which they matriculated in Trinity College although students have the option of meeting requirements in the major changed subsequent to the students' matriculation. A student who declares and completes requirements for two majors may have both recorded on the official record. See the chapter "Academic Procedures and Information" for the majors within each degree and for procedures on declaring a major.

Departmental Major. The courses for a departmental major may include introductory or basic prerequisite courses and higher-level courses in the major department or in the major department and related departments. Departmental majors are available in art history, biological anthropology and anatomy, chemistry, classical languages, classical studies, computer science, cultural anthropology, economics, English, French studies, geology, Germanic languages and literature, history, Italian and European studies, mathematics, music, philosophy, physics, political science, psychology, public policy studies, religion, Slavic languages and literatures, sociology, Spanish, and visual arts. The courses required for a major are specified by the department. The requirements appear in the section following each department's course descriptions.

Program Major. Students may satisfy the requirement by completing work prescribed for a major in approved programs, often interdisciplinary. These programs include African and African-American studies, Asian and African languages and literature, biology, Canadian studies, comparative area studies, drama, environmental sciences and policy, linguistics, literature, medieval and Renaissance studies, and women's studies. The requirements for these majors appear under each program in the chapter "Courses and Academic Programs."

Interdepartmental Major. A student may pursue an interdepartmental major program designed by the student and advisors, and approved by the director of undergraduate studies in the advisor's department, as an alternate means of satisfying the major requirement. An interdepartmental major consists of ten courses, at least four of which must be at the 100 level or above in each of two or more Trinity College departments or programs that offer a major. For procedures see the section on declaration of major or division in the chapter "Academic Procedures and Information."

The Minor. The courses required for a minor are specified by the department/academic program. Minors require a minimum of five courses, including at least three at the level of 100 or above. Further information about specific minors is available under the description of the individual department/academic programs in the chapter "Courses and Academic Programs." Students may not major and minor in the same department/program with the exception of three departments, in which multiple majors are already possible: (1) Art and Art History, (2) Classical Studies, and (3) Romance Studies.

Certificate Programs. Certificate programs are topically organized courses of study that afford a distinctive, usually interdisciplinary, approach to subject matter not available within any single academic unit. They include: The Arts; Dance; Early Childhood Education Studies; Film and Video; Genetics; Health Policy; Human Development; Judaic Studies; Latin American Studies; Markets and Management Studies; Neurosciences; Perspectives on Marxism and Society; Primatology; Science, Technology, and Human Values; and Study of Sexualities.

Fuller descriptions of these certificate programs appear in the chapter "Special Study Centers, Programs, and Opportunities" and "Courses and Academic Programs."

Restrictions on Majors, Minors, Certificates. A student must declare one major and may declare a second (although not a third) major. The combined number of majors, minors, and certificate programs may not exceed three. Thus, a student may declare as a maximum: two majors and either a minor or a certificate program; a major and two minors; a major and two certificate programs; or a major, a minor, and a certificate program.

Small Group Learning Experiences. By supplementing the classroom and lecture methods of instruction, small group learning experience courses assure students opportunities to engage in discussion, develop skills, refine judgment, and defend ideas when challenged. A *seminar* (ordinarily indicated by the suffix S) is an independent course of twelve to fifteen (exceptionally to twenty) students who, together with an instructor, engage in disciplined discussion. The number of meeting hours per term is the same as for regular courses of equivalent credit. Instructors are encouraged to present to each student at the end of the term a written evaluation of the student's work. A *tutorial* (T) is a group of one to five students and an instructor meeting for discussion which is independent of any other course. For *independent study* students pursue their own interests in reading, research, or writing, but meet with an instructor for guidance and discussion. See the section on independent study in the chapter "Academic Procedures and Information."

To meet the first-year seminar requirement, students who transfer to Duke with sophomore standing are required to complete a seminar by the end of their sophomore year at Duke or to submit documentation that they completed a seminar class at the college they attended previously.

While *discussion sections* (D) and *preceptorials* (P) do not satisfy the formal Small Group Learning Experience in the college, they offer additional opportunities for students to participate in small classes. A discussion section, with an enrollment limit set by the individual department, is an integral part of a larger regular course, and every member of the class is enrolled.

A *preceptorial* (P) is a group of usually no more than twelve students and an instructor in which discussion is the primary component; it is an additional and optional unit attached to a regular course involving one or more extra meetings per week. No additional course credit is given for a preceptorial.

Instructors in all courses that satisfy the requirements for small group learning experiences, including independent study, must meet with the students at least once every two weeks during the spring/fall semesters and at least once every week during the summer terms. The requirements for small group learning experiences are listed under Program I, above.

Preceptorials, discussion sections, seminars, and tutorials may not be taken on the pass/fail basis, unless the course is offered only on that basis.

Course Credits. Thirty-four semester courses are required for graduation, including a maximum of two courses passed with a grade of D. Twelve courses must be at the advanced (100-200) level. The thirty-four course credits may include (1) no more than one semester-course credit in physical education activity courses; (2) no more than four

semester-course credits in dance/American Dance Festival technique/performance courses (i.e., a total of eight half-credit courses); (3) no more than two credits for house courses; (4) no more than six credits for courses taken in professional schools; (5) no more than one semester-course credit from academic internships; and (6) no more than four semester-course credits in military science. Certain military science courses listed as carrying credit do not count toward graduation but appear on a student's permanent academic record. Military science courses, like professional school and all physical education courses, do not satisfy general studies (area of knowledge) requirements. (American Dance Festival courses are included in the total limitation on dance technique/performance courses as noted above in this paragraph.) For limitations on transfer credit and Advanced Placement credit, see the sections on advanced placement and transfer of work elsewhere in the chapter "Academic Procedures and Information" and the section on residence below.

Residence. A residence period of eight semesters is the typical amount of time a student may take to earn either the Bachelor of Arts or the Bachelor of Science degree. This period may be extended for one or two semesters by a student's academic dean for legitimate reasons, if it seems probable that an extension will enable the student to complete all remaining requirements for graduation. A student will not be permitted residence of more than ten semesters in order to be graduated.

For the minimum residence period, at least seventeen courses must be satisfactorily completed at Duke, including the courses needed to meet the senior year residence requirement. (For the purposes of the residence requirement, advanced placement credits are not considered as courses taken at Duke; see the section on advanced placement in the chapter "Academic Procedures and Information.") If only seventeen courses are taken at Duke, they must include the student's last eight courses. A student with more than seventeen courses at Duke may take two of the last eight courses at another approved institution. A student who has completed twenty-six courses at Duke may take four of the last eight courses at another approved institution. Courses taken elsewhere must be approved in advance by the appropriate director of undergraduate studies and the student's academic dean.

Former students of Trinity College or the Woman's College who have been out of college for at least six years, and left in good standing, may, with certain provisos, take up to eight semester-courses in another institution of approved standing in final fulfillment of graduation requirements. Further information can be obtained from the associate dean of Trinity College of Arts and Sciences responsible for coordinating readmission.

PROGRAM II

Nature and Purpose. Students who believe that their intellectual interests and talents would be better served outside the regular curriculum options under Program I are encouraged to explore the academic option offered through Program II. If admitted into Program II, students follow individualized degree programs to examine and explore a topic, question, or theme as a core area of study which is not generally available as a course of study within Program I. As degree candidates in Program II, students separate themselves from the requirements and options of Program I including the requirement for a major and the options of multiple majors and minors.

Students who seek out Program II, are, typically, those who find that their intellectual interests cross departmental boundaries or who perceive areas of learning in clusters other than those of the current departmental units of the university. Program II graduates have gone on to graduate and professional schools around the country and to satisfying positions in many areas of employment. They have won important awards, including Rhodes and Fulbright Scholarships, and have received national recognition for career success. Among the many topics for Program II have been Architectural Design,

Bioethics, Dramatic Literacy, the Epic in Music and Literature, Planetary and Evolutionary Biology, and U.S. National Security.

Admission. If interested in Program II, students should first attend an information session, then confer with faculty or directors of undergraduate studies in the departments closest to their interests, and with the academic dean for Program II. Students will select a faculty advisor in one of the departments or programs of Trinity College; that department or program will become the sponsor for the student. Admission to Program II requires students to propose a topic, question, or theme for the degree program and to plan a special curriculum adapted to their individual interests and talents. The student and faculty advisor together assess the student's background, interests, and ambitions and evaluate the resources at the university, or outside it, as means of satisfying those ambitions.

The curricular program proposed by a Program II candidate must address the student's specific interests and must also meet the general expectations for a liberal education in Trinity College. It must be a coherent plan for learning rather than a sampler of interesting courses and should incorporate the depth and breadth of study expected of a liberal education in Trinity College. Programs may be proposed for either the Bachelor of Arts or the Bachelor of Science degree; in the latter case, the sponsoring department must offer a Program I major within the B.S. degree option. The program must be approved by the sponsoring department or program and also by the Committee on Program II of the Faculty Council of Arts and Sciences.

Upon endorsement by the Program II Committee, the program becomes an obligation assumed by the student, although it may be modified later with the approval of the advisor and the Committee on Program II. Until formally accepted into Program II, a student should register for courses to satisfy the curricular requirements for Program I. Students who withdraw from Program II for any reason assume all requirements of Program I. Students will be accepted into Program II only after their first semester at Duke; they are ineligible for admission after their junior year. Further information and applications may be obtained from the Premajor Advising Center and from the office of the academic dean responsible for Program II.

General Requirements: Apart from the requirements arising from the approved plan of work, a Program II student must satisfy certain general requirements: thirty-four semester-course credits for graduation; curricular breadth; the regulations on military science, house, professional school, and physical activity and dance courses; and residence, although the regulation relating to the last eight courses may be adjusted to suit the student's approved plan of work. Graduation with distinction is available for qualified students in Program II. See the section on honors in the chapter, "Academic Procedures and Information."

COMBINATION PROGRAMS OF TRINITY COLLEGE AND DUKE PROFESSIONAL SCHOOLS

A student interested in attending a Duke professional school (business, environment, and law) may, upon meeting certain requirements, combine the senior year in Trinity College of Arts and Sciences with the first year in the professional school. To qualify the student must (1) successfully complete twenty-six semester courses in Trinity College; (2) fulfill all other degree requirements in Trinity College except for eight elective courses; (3) obtain the approval of the appropriate preprofessional advisor and academic dean in Trinity College; and (4) be admitted to the professional school. If the student's application to the professional school is accepted, the student transfers to the professional school for the fourth year and begins work on the professional degree. Upon successful completion of the work in the first year of the professional school, the baccalaureate degree is awarded to the student. The undergraduate record notes the student's enrollment in the combination program, the name of the professional school,

the date of graduation from Trinity College, and the degree awarded, but it does not include courses taken in the professional school. Counseling and additional information are available from the preprofessional advisors.

PREPARATION FOR GRADUATE AND PROFESSIONAL SCHOOLS

Students planning to enter a graduate or professional school should consult their faculty advisors, director of undergraduate studies, or academic dean at the earliest opportunity. Since many graduate and professional schools require special tests for students seeking admission, information regarding requirements should also be obtained from the catalogs of the appropriate schools. Applications for the testing programs required for admission to graduate or professional schools can be obtained from the appropriate pre-professional school or pre-graduate school advisor in Trinity College of Arts and Sciences or from the Office of Counseling and Psychological Services (CAPS).

Graduate Schools of Arts and Sciences. Students interested in obtaining a master of science, master of arts, or doctor of philosophy degree should discuss their plans as early as possible with faculty in the proposed field of advanced study and obtain a copy of "Preparing for Graduate Study in the Arts and Sciences," a handbook available from the Premajor Advising Center or 04 Allen Building. As undergraduates, they should become involved in research which may involve laboratory work, advanced seminars, or independent study. Many graduate schools require a reading knowledge of a foreign language. Information on this and other requirements is available in the bulletins of specific graduate programs and in the *Directory of Graduate Programs* published by the GRE board and Council of Graduate Schools. It may also be included in the "Handbook for Majors" for the major department. A research mentor, a faculty advisor, and the Ph.D. advisor in the major department are the best resources for advice about graduate school in the arts and sciences. General advice may be sought from the advisor for pre-graduate study, 04 Allen Building.

Graduate Schools of Engineering. Students interested in graduate work in engineering should consult the dean of the School of Engineering or the director of graduate studies in one of the engineering departments. Most engineering graduate schools require that a candidate have the equivalent of a Bachelor of Science in Engineering degree; however, students in the natural and social sciences may obtain conditional admission if they have a sufficient background in mathematics.

Graduate Schools of Business. Students seeking information about graduate schools of business should consult the advisor in Trinity College. In preparing for graduate business school, students should gain a good liberal arts background, choosing courses that will help them develop communication skills, analytical skills, and an understanding of human nature. Students have often chosen such courses as Computer Science 1, Economics 1D and 2D (or 51 and 52), Economics 83, and Mathematics 31 as those which develop analytical skills. For further information concerning undergraduate preparation, see the *Prebusiness Handbook for Duke Seniors and Alumni* and *The Official Guide to MBA Programs*, published by the Graduate Management Admission Council; these publications and other resource materials are available in the Prebusiness Advising Office, 03 Allen Building.

Medical and Dental Schools. Students planning to enter schools of medicine and dentistry can prepare for admission by completing any of the regular departmental majors in Program I or by completing Program II, and by taking those courses required by the professional schools of their choice. Virtually all medical schools and most schools of dentistry require the same basic group of college premedical courses—a year of biology, a year each of inorganic and organic chemistry, and a year of general physics.

In addition, many schools require a year of English and courses in the humanities or social sciences. About a fifth of all medical schools require a year of college mathematics and some specify calculus, statistics, or computer science. For a complete listing of these and any additional course requirements set by each school, consult *Medical School Admissions Requirements*, published by the Association of American Medical Colleges or *Admission Requirements of U.S. and Canadian Dental Schools*, published by the American Association of Dental Schools. These and similar resources for schools of optometry and veterinary medicine are located in the Health Professions Advising Office. Students should discuss their programs of study with their major advisors, academic deans, and with the advisor for the health professions.

Graduate Programs in the Health Professions. Students interested in careers as physical therapists, health administrators, or others of the allied health professions should prepare with course work in the natural sciences and behavioral sciences within a liberal arts curriculum. Descriptive literature on each of the allied health schools and professions is part of the library maintained in the Health Professions Advising Office, where students will also find publications of selected advanced degree programs in biomedical research, including the combined M.D./Ph.D. degree programs.

Law Schools. Students who plan to prepare for law school and a career in law should seek breadth in their undergraduate course program with specialization in one or more areas. They may choose virtually any field for their major work. Though no specific courses are required, prelaw students have often chosen from among the following: Economics 1D, 2D, 83; English 117S; History 21D, 22D, 91D, 91S, 92, 92D, 92S, 241-242; Philosophy 48; Political Science 91D, 127, 207S; Public Policy Studies 55D; Sociology 10D and 157.

For a fuller discussion of undergraduate preparation for the study of law, students should refer to the *Duke Prelaw Handbook* or the *Prelaw Handbook* published by the Association of American Law Schools and the Law School Admission Council, or consult the prelaw advisor in the college.

Theological Schools and Religious Work. Students contemplating theological study should correspond at the earliest opportunity with the appropriate schools and with the authorities of their respective judicatories to learn how to prepare for the specific programs they expect to enter. They should consider the following subjects: English language and literature; history, including non-Western cultures as well as European and American; philosophy, particularly its history and its methods; natural sciences, both the physical and the life sciences; psychology, sociology, and anthropology; the fine arts and music; biblical and modern languages; religion, both in the Judeo-Christian and in the Near and Far Eastern traditions. Some seminaries require Greek or Hebrew for admission. It is the understanding gained in these fields rather than the total number of credits or semester hours earned that is significant. More detailed information about theological education may be obtained from the director of admissions of the Divinity School.

The School of Engineering

Duke University offers in the School of Engineering programs of study which lead to the degree of Bachelor of Science in Engineering. Four programs are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). These programs are biomedical engineering, civil engineering, electrical engineering, and mechanical engineering. These accredited programs, and special programs of study in interdisciplinary fields, are offered by the Departments of Biomedical Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, and Mechanical Engineering and Materials Science.

For graduation with a Bachelor of Science in Engineering degree, a student must complete successfully a minimum of thirty-four semester courses. These thirty-four semester courses must include the following:

General Requirements*

Writing	1 s.c.	This requirement is met by completing a University Writing Course.
Mathematics	4 s.c.	This requirement is met by completing Mathematics 31, 32, and 103; plus 104 or 111 or 135.†
Natural Science	4 s.c.	This requirement is met by completing Chemistry 11L, Physics 51L and 52L, and an elective course in one of the natural science departments which presents fundamental knowledge about nature and its phenomena, preferably including quantitative expression.†§
Humanities and Social Sciences	5 s.c.	This requirement is met by completion of five courses selected from at least three of the following four areas of knowledge: Arts and Literatures (AL), Civilizations (CZ), Foreign Languages (FL), and Social Sciences (SS). At least one course must be classified SS. In order to provide depth in the subject matter, at least two of the five courses must be selected from a single department and at least one of those courses must be 100-level or above. This program of courses should reflect a thematic coherence and fulfill an objective appropriate to the engineering profession. Courses selected must be those which present essential subject matter and substance of the discipline. This requirement is met by completion of one course from each of four of the following six areas: electrical science, information and computer science, mechanics (solid and fluid), materials science, systems analysis, and thermal science and transfer processes. See departmental requirements, which follow, for any specific courses to be included
Engineering and Applied Sciences	4 s.c.	This requirement is met by completion of one course from each of four of the following six areas: electrical science, information and computer science, mechanics (solid and fluid), materials science, systems analysis, and thermal science and transfer processes. See departmental requirements, which follow, for any specific courses to be included
Digital Computation		Students are expected to have acquired digital-computer programming capability before their sophomore year. The programming capability may be satisfied by Advanced Placement or by passing Engineering 53L or Computer Science 6 or 100E.

*No more than 1 s.c. credit in physical education activity and 1 s.c. credit in music activity can be used to meet Bachelor of Science in Engineering degree requirements. House courses may not be used to meet BSE requirements.

†A minimum of 9 s.c. credits in mathematics, natural science, and statistics are required.

§Physics 41L and 42L may be substituted for Physics 51L and 52L. Courses in mathematics, statistics, and computer science will not meet the elective requirement. A list of disallowed courses is maintained in the dean's office.

Departmental Requirements

Departmental
Specifications 16 s.c.

The department administering the major field of study will specify this requirement. In general, it will consist of both required courses and electives to be planned in consultation with the departmental advisor. Including the 4 s.c. in engineering and applied sciences listed under general requirements, a total of 13.0 s.c. in engineering work are required. See the individual departmental requirements, which follow.

*Total Minimum
Requirement 34 s.c.

Biomedical Engineering Departmental Requirements

All general requirements and departmental requirements comprising the accredited biomedical engineering major are incorporated in the following sequence, only one of several possible sequences. The student is encouraged to choose electives and select a sequence which develops broad intellectual interests.

Freshman Year

First Semester	Courses	Second Semester	Courses
Chemistry 11L	1	Chemistry 12L	1
University Writing Course	1	Physics 51L	1
Mathematics 31	1	Mathematics 32	1
Engineering 53L or Social Science or Humanities Elective	1	Social Science or Humanities Elective or Engineering 53L	1
Total	4	Total	4

Sophomore Year

First Semester	Courses	Second Semester	Courses
Physics 52L	1	Biomedical Engineering 163.....	1
Electrical Engineering 61	1	Elective	1
Mathematics 103	1	Mathematics 111	1
†Biomedical Engineering 83L or Engineering 83L	1	Social Science or Humanities Elective	1
Elective	1	Life Science Elective	1
Total	5	Total	5

Junior Year

First Semester	Courses	Second Semester	Courses
Biomedical Engineering 110 or Engineering 75L	1	Biomedical Engineering 145 or Mechanical Engineering 101L or Electrical Engineering 176	1
Electrical Engineering 64 or Biomedical Engineering 171.....	1	Life Science Elective	1
Biomedical Engineering 101	1	Biomedical Engineering 164	1
Social Science or Humanities Elective	1	Mathematics 114	1
Total	4	Total	4

*A maximum of two semester courses of junior or senior level air science, military science, or naval science course work may be counted in satisfying the minimum requirements of thirty-four semester courses for a baccalaureate degree in engineering. These courses must be included in the sixteen semester courses listed under departmental requirements. All other courses completed in air, military, or naval science are taken in addition to the minimum program.

†Biomedical Engineering 83L is not required for students who complete a second major in electrical engineering.

Senior Year

First Semester	Courses	Second Semester	Courses
Biomedical Engineering 207	1	Biomedical Engineering Elective	1
Statistics 113	1	Biomedical Engineering Elective	1
Biomedical Engineering Elective.....	1	Social Science or Humanities Elective	1
Biomedical Engineering Elective.....	1	Social Science or Humanities Elective	1
Total	4	Total	4

Students preparing for medical school should schedule Chemistry 151L and 152L, and *two* life science electives before the end of their junior year by deferring some required courses to the senior year. Biomedical engineering electives include all courses with biomedical engineering numbers other than required courses. Mechanical Engineering 126 may be taken also as a biomedical engineering elective.

Civil and Environmental Engineering Departmental Requirements

All general and departmental requirements comprising the accredited civil engineering major are incorporated in the following typical sequence of courses. This sequence is only one of several possible sequences and students are encouraged to work closely with their advisor in choosing electives and selecting a sequence of courses to develop their individual interests.

Freshman Year

First Semester	Courses	Second Semester	Courses
Chemistry 11L	1	Engineering 24L or Engineering 25L	1
Mathematics 31	1	Mathematics 32	1
Engineering 53L or Elective	1	Elective or Engineering 53L	1
University Writing Course	1	Physics 51L	1
Total	4	Total	4

Sophomore Year

First Semester	Courses	Second Semester	Courses
Engineering 75L	1	Engineering 123L	1
Mathematics 103	1	Mathematics 111	1
Physics 52L	1	Engineering 25L or Engineering 24L	1
Elective	1	Elective	1
Total	4	Total	4

Junior Year

First Semester	Courses	Second Semester	Courses
Civil Engineering 122L	1	Engineering 150L	1
Civil Engineering 131L	1	Elective or Statistics 113	1
Statistics 113 or Elective	1	Elective	1
Engineering 115.....	1	Elective	1
Elective	1	Elective	1
Total	5	Total	5

Senior Year

First Semester	Courses	Second Semester	Courses
Elective	1	Civil Engineering 192	1
Elective	1	Elective	1
Elective	1	Elective	1
Elective	1	Elective	1
Total	4	Total	4

The program of electives shall include: at least one of Electrical Engineering 61L, Electrical Engineering 148L, Engineering 83L, Mechanical Engineering 101L or Biomed-

cal Engineering 145; at least five courses in humanities and social sciences; at least one course in the natural sciences; at least two courses chosen from Civil Engineering 116, 123L, and 139L; at least two other civil engineering elective courses at the 100 or 200 level. (Students planning to proceed to graduate school are advised to elect 200-level courses.) Any higher level environmental engineering course may be substituted for Engineering 24L and any higher level structures course may be substituted for Engineering 25L.

Students should also note that, in order to meet professional accreditation requirements of the American Society of Civil Engineers, the program of electives should be selected to ensure that the engineering work taken contains at least 8.5 s.c. equivalents in engineering science and at least 4.25 s.c. equivalents in engineering design. (More information is available from the departmental office, the director of undergraduate studies, and the faculty advisors.)

Electrical and Computer Engineering Departmental Requirements

The general requirements and departmental requirements comprising the accredited electrical engineering major are all incorporated in the following program. This program is presented as a guide to assist students in planning their four-year program and should not be viewed as an inflexible sequencing of courses.

Freshman Year

First Semester	Courses	Second Semester	Courses
Mathematics 31	1	Mathematics 32	1
Chemistry 11L	1	Physics 51L	1
University Writing Course	1	Approved Elective	1
Computer Science 6 or 100E or Engineering 53L or Social Science-Humanities Elective	1	Computer Science 6 or 100E or Engineering 53L or Social Science-Humanities Elective	1
Total	4	Total	4

Sophomore Year

First Semester	Courses	Second Semester	Courses
Mathematics 103	1	†Mathematics 1A	1
Electrical Engineering 61L	1	Electrical Engineering 62L	1
Physics 52L	1	Electrical Engineering 64	1
Social Science-Humanities Elective	1	Social Science-Humanities Elective	1
Total	4	Approved Elective	1
		Total	5

Junior Year

First Semester	Courses	Second Semester	Courses
†Mathematics 1B	1	†Mathematics 1C	1
*Electrical Engineering 1A	1	Electrical Engineering 170	1
Electrical Engineering 163L	1	*Electrical Engineering 1B	1
Social Science-Humanities Elective	1	Social Science-Humanities Elective	1
Total	4	§Natural Science Elective	1
		Total	5

*To be selected from two of the following areas: computer engineering; signal processing and communications; solid state electronics and circuits; systems and robotics; electromagnetic fields and optics.

†Students interested in computer engineering, signal processing and communications, systems and robotics, or power electronics should select Mathematics 104, 131, and 135 or Statistics 113. Students interested in solid state electronics and circuits or electromagnetic fields and optics should select Mathematics 111, 114, and 135 or Statistics 113.

§The following courses are recommended: Chemistry 12L; Physics 100, 105, 176, 181, and 185; Biology 21L.

Senior Year

First Semester	Courses	Second Semester	Courses
*Electrical Engineering 2A	1	Electrical Engineering Design Course	1
Electrical Engineering Elective	1	*Electrical Engineering 2B	1
†Engineering Elective	1	Approved Elective	1
Approved Elective	1	Approved Elective	1
Total	4	Total	4

Note: The selection of approved electives should take into account a departmental requirement that a student must have accumulated by graduation time the equivalent of 13.0 engineering courses, including an engineering design course to be taken in the junior or senior year of the program. This course must have as a prerequisite at least one course in the discipline; currently, Electrical Engineering 164, 251, 261, and 275 are approved. Engineering 23, Engineering 174, and Engineering 175 may not be counted toward the departmental requirement of 13.0 engineering courses. Two courses may be selected from any two of the following areas: information and computer science (Engineering 53L or Computer Science 6 or 100E may be used to satisfy this requirement), mechanics, materials science, and thermal sciences.

An up-to-date list of acceptable engineering design and engineering science courses may be obtained from the departmental office.

Mechanical Engineering and Materials Science Departmental Requirements

The general requirements and departmental requirements comprising the accredited mechanical engineering major are all incorporated in the following program. This sequence of the courses is presented as an overview of the program and is one of two recommended sequences of the course requirements.

Freshman Year

First Semester	Courses	Second Semester	Courses
Mathematics 31	1	Mathematics 32	1
Chemistry 11L	1	Physics 51L	1
University Writing Course	1	Engineering 83L	1
Engineering 53L or ‡Elective	1	‡Elective or Engineering 53L	1
Total	4	Total	4

Sophomore Year

First Semester	Courses	Second Semester	Courses
Mathematics 103	1	Mathematics 111	1
Physics 52L	1	Mechanical Engineering 101L	1
Engineering 75L	1	Engineering 123L	1
‡Elective	1	‡Elective	1
Total	4	Total	4

*To be selected from two of the following areas: computer engineering; signal processing and communications; solid state electronics and circuits; systems and robotics; electromagnetic fields and optics.

†To be selected from: mechanics (Engineering 75L or 123L, Mechanical Engineering 126L, or Biomedical Engineering 110); thermal sciences (Mechanical Engineering 101L, Electrical Engineering 176, Mechanical Engineering 150L, or Biomedical Engineering 145 or 202); or materials science (Engineering 83L or Biomedical Engineering 215).

‡Part of a program of approved electives planned with the student's faculty advisor to suit individual interests and abilities. Five of these nine electives must be selected to meet the humanities and social sciences requirements of the School of Engineering. Also, three of the nine electives must be 100 level or higher, with the exception that engineering courses below the 100 level taken during the freshman or sophomore years may substitute for two of these 100-level electives. ROTC courses cannot be counted toward the 100-level requirement.

Junior Year

First Semester	Courses	Second Semester	Courses
Mechanical Engineering 120L.....	1	Mechanical Engineering 126L.....	1
Mechanical Engineering 130L.....	1	***Electrical Engineering 148L.....	1
Natural Science Elective	1	†Mathematics or Natural Science Elective	1
*Elective.....	1	‡Quantitative Elective.....	1
*Elective.....	1	*Elective.....	1
Total	5	Total	5

Senior Year

First Semester	Courses	Second Semester	Courses
Mechanical Engineering 150L	1	Mechanical Engineering 160L.....	1
Mechanical Engineering 141L.....	1	§Mechanical Engineering Elective	1
§Mechanical Engineering Elective	1	*Elective.....	1
*Elective.....	1	*Elective.....	1
Total	4	Total	4

Declaration of Major. A student is urged to declare a major by the time of registration for the first semester of the sophomore year, but is required to do so by the time of registration for the first semester of the junior year. Declaration of major is accomplished by completing a form available in the Office of the Dean of Engineering.

Double Major. If an engineering student completes simultaneously the requirements for a departmental major in arts and sciences and the requirements for a Bachelor of Science in Engineering degree, or satisfies simultaneously the requirements for two engineering majors, the official record will indicate this fact. However, the director of undergraduate studies for the second major must certify that the departmental major requirements have been met. The student must initiate the procedure, either through the dean of the School of Engineering or through the director of undergraduate studies in the second department. The completion of the requirements for the major in this department must be confirmed no later than the time of registration for the final semester. Courses which are common to both majors shall be counted toward satisfying the requirements of both majors.

IDEAS. These interdisciplinary programs in engineering and applied science, leading to the Bachelor of Science in Engineering degree, provide opportunities for students to establish special majors in interdisciplinary fields such as computer engineering, environmental engineering, and materials science. Programs with a broad foundation in the engineering sciences also may be developed under this program by those who intend to enter nonengineering professions. Although not individually accredited, these programs satisfy the national engineering accreditation criteria.

*Part of a program of approved electives planned with the student's faculty advisor to suit individual interests and abilities. Five of these nine electives must be selected to meet the humanities and social sciences requirements of the School of Engineering. Also, three of the nine electives must be 100 level or higher, with the exception that engineering courses below the 100 level taken during the freshman or sophomore years may substitute for two of these 100-level electives. ROTC courses cannot be counted toward the 100-level requirement.

**A list of disallowed courses is maintained in the dean's office.

***With approval of the director of undergraduate studies, Electrical Engineering 61L or Physics 171L may be substituted.

†Including statistics, with the exception of Statistics 10. See recommendations below.

‡Restricted to mathematics, statistics, or computer science at the 100-level or higher, or engineering at the 200 level. The following are strongly recommended: Mathematics 114, Statistics 113, or Computer Science 150. Students interested in graduate studies in engineering should take Mathematics 114.

§Restricted to 100-level or higher.

Any student, in consultation with the advisor or another faculty member, may propose a unique combination of courses designed to meet particular career objectives. A proposal must be submitted to the associate dean of the School of Engineering and the Engineering Faculty Council for approval; it may be submitted as early as the second semester of the freshman year and must be submitted before the beginning of the senior year. The proposal must include a letter stating the student's reasons for pursuing the suggested program of study.

Bachelor of Science in Engineering/Master of Science Program. This program provides students with an opportunity to plan a coordinated five-year program of studies in the School of Engineering leading to both the Bachelor of Science in Engineering and Master of Science degrees. Application for admission to this integrated program may be made during the junior or senior year. Provisional admission to the Graduate School may be granted when the student enrolls for the semester during which the Bachelor of Science in Engineering degree requirements will be completed. Graduate level courses during this period which are in excess of Bachelor of Science in Engineering requirements may be credited toward fulfillment of the Master of Science degree requirements.

International Honors Program. The International Honors Program is a certificate program consisting of six to eight semester courses, depending on the foreign language level proficiency of the student. All of the IHP course requirements may, with sufficiently advanced planning, fulfill humanities and social sciences or approved elective requirements which are encompassed in the school's accredited engineering programs. Early planning and advising are essential to fulfilling all IHP requirements as part of the baccalaureate degree program. Specific program requirements and an application may be obtained in the office of the dean of engineering.

Certificate Program in Architectural Engineering. The objective of this interdisciplinary program is to provide students with an understanding of the relationships between the design elements of buildings and construction processes. This certificate program is available only to students enrolled in the School of Engineering. Specific program requirements may be obtained in the Office of the Dean of Engineering.

Residence Requirements. At least seventeen semester courses must be completed satisfactorily at Duke. This must include the work of the final two semesters, with the following exceptions: the student who has completed more than four full semesters of work at Duke may take the last two courses elsewhere; others may take the last course elsewhere. The courses taken elsewhere must be approved in advance by the student's major advisor and academic dean.

Pass/Fail Grading Option. With the consent of the instructor and the faculty advisor, an engineering student may choose to be graded on a pass/fail basis in up to four unrestricted electives or social sciences-humanities electives within the thirty-four-course program. A student may take no more than one course on a pass/fail basis each semester.

Repetition of Courses. An engineering student who has earned a grade of D-, D, or D+ in a required mathematics course or a required engineering course may, with permission of his or her advisor, director of undergraduate studies, and academic dean, repeat the course. Both grades will remain on the student's record. Only one credit may be counted toward satisfying continuation requirements and toward fulfilling graduation requirements.

Academic Recognition. In acknowledgment of high academic achievement, recognition is given each semester to freshmen, sophomores, juniors, and seniors. For a fuller explanation, see the section on Dean's List in the chapter "Academic Procedures and Information."

Continuation Requirements. A student must achieve a satisfactory record of academic performance each semester and make satisfactory progress toward graduation to remain enrolled in the university.

A student must pass at least three courses in each semester, except for the first semester of the freshman year, in which at least two courses must be passed. A student who fails to meet this continuation requirement must leave the university for at least two semesters. A complete summer session may be counted as a semester. Following application for readmission, return must be approved by the dean and the director of undergraduate studies in the student's major department. If the student thereafter fails to pass three courses in a semester, permanent dismissal from the university usually results. A student who enrolls in more than four courses in a given semester and fails two or more of them will not be permitted to enroll for more than four courses in the following semester without approval of the dean. In addition, a student may be dismissed temporarily or permanently for failing to make satisfactory progress toward graduation, including satisfactory progress toward fulfillment of curricular requirements within ten semesters.

The term satisfactory progress shall be defined also by the following schedule:

1. To begin enrollment in the second year, a student must have passed 6 s.c. at Duke and earned *P*, *C*-, or better in 4 s.c.
2. To begin enrollment in the third year, a student must have passed 13 s.c. at Duke and earned *P*, *C*-, or better in 11 s.c.
3. To begin enrollment in the fourth year, a student must have passed 20 s.c. at Duke and earned *P*, *C*-, or better in 18 s.c.
4. To begin enrollment in the fifth year, a student must have passed 27 s.c. at Duke and earned *P*, *C*-, or better in 25 s.c.

Grade Requirement for Graduation. Of the thirty-four semester courses which fulfill the specified categories in the Bachelor of Science in Engineering degree requirements, thirty-two or their equivalent in number must be passed with grades of *P*, *C*-, or better.



Academic Procedures and Information



Advanced Placement

Scores on the tests discussed below and documented previous educational experience are the criteria used to determine a student's qualifications for certain advanced courses. If questions arise, students should consult the director of undergraduate studies in the appropriate department or the university registrar.

College Board Advanced Placement Program (AP) Examinations. A score of 4 or 5 on College Board Advanced Placement Program Examinations, taken prior to matriculation in college, is the basis for consideration for credit and/or placement in advanced courses in art, biology, chemistry, computer science, economics, English, French, German, history, Latin, music, physics, political science, psychology, and Spanish. The Department of Mathematics will consider a score of 3 for placement beyond the introductory course. The record of a student presenting such a score and desiring to continue in the same subject at Duke will be evaluated for credit and for placement in an advanced course. Departmental policies regarding advanced placement and credit may vary. In the case of French, German, Latin, and Spanish, AP scores of 4 or 5 may result in placement in courses at the 100 level; approval of the director of undergraduate studies or supervisor of freshman instruction in the appropriate department is required before final placement is made. Credit may be granted for one or two courses in each subject area, with the approval of the academic department concerned. Scores should be submitted to the Office of the Registrar no later than the end of the sophomore year.

International Entrance Examinations. Duke University recognizes the International Baccalaureate Program, the French Baccalaureate, the British A-Level Examinations, the Hong Kong A-Level Examinations, the German Abitur and the Swiss Federal Maturity Certificate. Advanced standing credit and/or placement can be awarded upon the recommendation of the concerned Duke department. Scores acceptable for consideration are determined by the faculty and evaluated by the university registrar.

For students matriculating after May 1998:

College Board Advanced Placement Program (AP) Examinations. A score of 4 or 5 on College Board Advanced Placement Program Examinations, taken prior to matriculation in college, is the basis for recording AP courses on a student's permanent Duke record as well as the basis for consideration of placement in advanced courses in art, biology, chemistry, computer science, economics, English, French, German, history, Latin, music, physics, political science, psychology, and Spanish. The Department of Mathematics will also consider a score of 3 for placement beyond the introductory course. The record of a student presenting such a score and desiring to continue in the same subject at Duke will be evaluated for placement in an advanced course. Departmental policies regarding advanced placement may vary. In the case of French, German, Latin, and Spanish, AP scores of 4 or 5 may result in placement in courses at the 100 level; approval of the director of undergraduate studies or supervisor of freshman instruction in the appropriate department is required before final placement is made.

All AP courses completed with a score of 4 or 5 will be recorded on a student's permanent Duke record. Students may use all of these courses for placement into higher level courses and to satisfy departmental major and minor requirements at Duke to the extent allowed by individual departments. Credit toward the degree is awarded for recorded AP courses according to the following policy.

In Trinity College, students may be granted up to two elective course credits toward the degree requirement of 34 course credits; up to six additional credits may be awarded for acceleration toward the degree. Specifically, the two elective as well as two acceleration credits may be included in the graduation total for students graduating after seven semesters; the two elective and six acceleration credits may be included in the graduation total for students completing their degrees after six semesters. Students wishing to graduate early must complete an early graduation form, available from their academic dean, by the end of the fifth semester of enrollment.

International Entrance Examinations. Duke University recognizes the International Baccalaureate Program, the French Baccalaureate, the British A-Level Examinations, the Hong Kong A-Level Examinations, the German Arbitur, and the Swiss Federal Maturity Certificate. Scores acceptable for consideration are determined by the faculty and evaluated by the university registrar. Course equivalents for these programs may be recorded on a student's permanent Duke record for placement and credit according to the same policy governing use of College Board Advanced Placement (AP) courses. (see above).

College Board Tests. Scores on College Board Tests are the basic criteria for placement in French, German, Spanish, Latin, and mathematics. Course credit is not given for courses bypassed. The following tables will assist students in making reasonable course selections in the subjects indicated.

	<u>College Board Achievement Score</u>	<u>Placement</u>
French*	200-370 380-440 450-540 550-590 600 plus	French 1 French 12 French 63 French 76 French 100-level course
German*	200-400 410-510 520-590 600 plus	German 1† German 65-66 German 69 Third year‡
Spanish*	200-420 430-490 500-570 580-620 630 plus	Spanish 1 Spanish 12 Spanish 63 Spanish 76 Spanish 100-level course
Latin*	200-520 530-630 640 plus	Latin 1 Latin 63 Third year‡
Mathematics§	500-650 660-800	Math. 25L Math. 31L, or with one year of high school calculus, Math. 41

*In these languages students are permitted to drop back one level without loss of credit (e.g., from 100 to 76 or from 76 to 63 in French and Spanish, from 117 to 69 or from 69 to 66 in German). No credit will be allowed for courses two levels below the achievement score (e.g., students with a score of 640 in French or Spanish could not receive credit for 63, but could for 76). In no case will credit be given for 1 and 2 to students with three or more years of high school French or Spanish.

†The first year of a language may not be taken for credit by a student who has completed more than two years of that language in secondary school. In rare cases, an exception may be granted with permission of the director of undergraduate studies in the appropriate department.

‡An exception may be granted in consultation with the director of undergraduate studies.

§In the absence of an achievement test score, course placement is determined by the SAT score as follows: 670 or below—Math. 25L; 680-800—Math. 31L.

Newly admitted students who wish to continue the study of French, German, Spanish, or Latin begun in secondary school must take a College Board Achievement Test or College Board Advanced Placement (APP) Examination in that language by June of the senior year in secondary school. Students who plan to take mathematics at Duke are expected to present College Board SAT, Mathematics Achievement (Level I or Level II), or Advanced Placement Program (APP, either level AB or level BC) scores. Placement testing is not offered during New Student Orientation in mathematics or in languages covered by the Achievement Test or Advanced Placement Examination programs of the College Board. New students who wish to continue the study of French, German, Spanish, or Latin but who found that it was not possible due to extraordinary circumstances to take the appropriate College Board examinations, may petition to take a placement test at Duke University prior to the beginning of New Student Orientation. Petitions explaining the reason a test was not taken must be received by the Coordinator of Testing, Counseling and Psychological Services, P.O. Box 90955, by July 1. If the petition is granted, a fee will be charged to cover testing costs. Because residence halls are not open before the beginning of New Student Orientation, students whose petitions are granted will also need to arrange accommodations in the Durham area.

All students who plan to take mathematics during their first semester at Duke, and who do not submit the College Board SAT or Achievement Test or Advanced Placement Program score in mathematics, should consult with the supervisor of first-year instruction in mathematics during New Student Orientation. New students who have been placed in Mathematics 25I or 31L on the basis of College Board SAT, Achievement, or Advanced Placement Examinations but who believe that their background in mathematics justifies a higher placement, should also confer during New Student Orientation with the supervisor of first-year instruction or with the director of undergraduate studies in the department of mathematics.

Placement in Languages Other Than French, German, Spanish, and Latin. Students who wish to continue in any language other than French, German, Spanish, or Latin should consult with the appropriate director of undergraduate studies. In the case of Russian, the department offers an examination which is used in conjunction with other criteria for placing students at the appropriate level.

Reading Out of Introductory Courses. Students demonstrating academic ability may be granted the option of reading out of an introductory or prerequisite course in order to allow them to advance at their own pace to upper-level work. No course credit may be earned by reading out. Reading for a course and auditing are mutually exclusive procedures. Students should consult with the appropriate directors of undergraduate studies who must approve the proposed program of reading. Students may be certified for advanced course work by passing a qualifying examination prepared by the department. When an advanced course is completed, an entry is made on the permanent record that the qualifying examination was passed, but no course credit is awarded.

Transfer of Work Elsewhere

Work Done Prior to Matriculation at Duke. First-year Duke students may submit for evaluation college courses taken after the commencement of the student's junior year of high school. Students transferring from a degree program in another regionally accredited institution may be granted credit for up to seventeen semester-course credits. Students will not be awarded more than four semester-course credits for one semester's work unless they have satisfactorily completed more than the normal course load at the institutions from which they are transferring credit. Courses taken at other institutions prior to matriculation at Duke are evaluated by the university registrar and the faculty.

Evaluation of Work Taken Elsewhere. Courses in which grades of less than C- have been earned are not accepted for transfer credit; students seeking transfer credit for

courses in which they earned a *P* grade must present official verification that the *P* is equivalent to at least a *C-* grade. The semester-course unit of credit awarded at Duke for satisfactorily completed courses cannot be directly equated with semester-hour or quarter-hour credits. Credit equivalency is determined by the university registrar. All courses approved for transfer are listed on the student's permanent record at Duke, but grades earned are not recorded. Further information is available from the university registrar.

College-level courses taken during the high school years are eligible for consideration for transfer of credit to Duke upon receipt of the following documentation: an official transcript of all college courses, sent directly from the college(s) attended to Duke; official notification by letter from the high school principal or guidance counselor that the credit earned was not used to meet high school diploma requirements; an official letter of verification from each college attended indicating that all courses were taken on the college campus, taken in competition with degree candidates of that college, taught by regular members of the college faculty, and were a part of the normal curriculum of the college. Course descriptions of all courses taken are required for evaluation. By policy, all precalculus and English composition courses taken during the high school years do not transfer to Duke.

After matriculation as a full-time degree candidate at Duke University, a student in Trinity College of Arts and Sciences may receive credit toward the Bachelor of Science or Bachelor of Arts degree for two courses taken in the domestic United States at another institution, whether in the summer while regularly enrolled at Duke, while withdrawn voluntarily from the college, or while on leave of absence for personal, medical, or financial reasons. Trinity College students, when eligible, may also receive transfer credit for up to ten courses taken in an approved program for study abroad (see the section on Study Abroad). In some cases, transfer credit may be received for a maximum of four of the final eight courses toward the bachelor's degree (see the section on residence). Once matriculated, however, a student may not receive credit for more than a total of ten transfer courses toward the Bachelor of Science or Bachelor of Arts degree. Full-time degree candidates in the School of Engineering may receive credit toward the Bachelor of Science in Engineering degree for a maximum of four courses taken at another institution. No credit will be accepted for course work taken while a student is withdrawn involuntarily. For purposes of this regulation, advanced placement and interinstitutional credit (see the section on agreement with neighboring universities) are not considered as work taken at another institution.

Students may not transfer credit from two-year colleges after completing their sophomore year. At least half the courses submitted toward fulfillment of a student's major field must be taken at Duke, but departments may make exceptions to this rule in special circumstances. No credit is given for work completed by correspondence, and credit for not more than two semester courses is allowed for extension courses.

Approval for Courses Taken Elsewhere. Approval forms for Duke students taking courses at institutions other than Duke may be obtained from the offices of the academic deans. Students wishing to transfer credit for study at another regionally accredited college while on leave or during the summer must present a catalog of that college to the appropriate dean and director of undergraduate studies and obtain their approval prior to taking the courses.

Advising

Students and their advisors confer when necessary, but they should confer at least once before every registration period to review goals, plans for achieving them, and any problems encountered or anticipated. Before declaring a major in Trinity College, students confer with the premajor advisor, the academic dean for premajor students, or the academic dean in the division of their interests. Upon declaring a major, the student

is assigned a faculty advisor; the academic dean for that division is also available for consultation. In the School of Engineering, the advisor's approval is necessary for registration and all course changes. Much good advising is informal and occurs in conversation with members of the faculty. Students have the responsibility to understand and meet the requirements for the curriculum under which they are studying and should seek advice as appropriate.

Registration

Students are expected to register at specified times for each successive term. Prior to registration each student receives special instructions and registration materials. Students prepare a course program, and submit it at an appointed time to their advisors for review. In the School of Engineering, the schedule must be approved by the advisor.

Students who expect to obtain certification to teach in secondary and elementary schools should consult an advisor in the education program prior to each registration period to ensure that they are meeting requirements for state certification and that they will have places reserved for them in the student teaching program.

Those who register late are subject to a \$50 fine. In the case of students enrolled in Continuing Education, late fees are assessed after the first day of classes. Students who fail to register for the fall or spring semester are withdrawn and must apply for readmission if they wish to return; they also forfeit their registration deposits unless they indicate at the time of registration their intention not to continue in the university the following term. Those students who have not paid any fees owed to or fines imposed by the university (such as laboratory fees, library fines, and parking fines) by the date specified for registration for the following term will not be permitted to register for the following term until such fees and fines have been paid in full, notwithstanding the fact that the student may have paid in full the tuition for the following term.

Students planning to register for a course under the reciprocal (interinstitutional) agreement must have the course approved by the appropriate director of undergraduate studies and their academic dean. Further information about registration procedures once approval is given may be obtained from the Office of the Registrar. See the chapter "Special Study Centers, Programs, and Opportunities" for information regarding the reciprocal agreement with neighboring universities.

Duke Identification Card and Term Enrollment. Undergraduate students are issued identification cards which they should carry at all times. The card is a means of identification for library privileges, university functions, and services available to university students. Students are expected to present their card on request to any university official or employee. The card is not transferable, and fraudulent use may result in loss of student privileges or suspension. Loss of the card should be reported immediately to the Duke Card Office where new ones can be obtained for \$10. Official enrollment is required for admission to any class. Failure to report, or to account beforehand for an absence, entails a loss of registration in courses.

Concurrent Enrollment. A student enrolled at Duke may not enroll concurrently in any other school or college without special permission of the appropriate academic dean. See, however, the statement regarding the reciprocal agreement with the University of North Carolina at Chapel Hill, North Carolina Central University in Durham, and North Carolina State University at Raleigh.

Course Changes after Classes Begin in the Fall and Spring Terms. During the drop/add period changes may be made in course schedules. Students may drop and add courses during the first week of classes in the fall and spring terms at their own discretion; during the second week of the drop/add period they may drop courses at their own discretion, but the approval of the appropriate instructor is required for adding a course. After the drop/add period no course may be added; also, a course may

not be changed to or from the pass/fail or audit basis. To withdraw from a course, students must obtain permission from their academic deans; and for reasons of course overload, i.e., more than four semester courses, the academic dean may give permission prior to the last day of classes preceding the final four weeks of classes. The academic dean may also permit students with compelling reasons and in a normal course load to withdraw from a course prior to the last day of classes preceding the final four weeks of classes. After the drop/add period, students permitted to withdraw receive a WP grade (withdraw passing) or WF (withdraw failing) from the instructor. Course work discontinued without the dean's permission will result in a grade of F.

When students note an error in their course schedules, they should consult with their academic dean.

Course Changes for the Summer Terms. Course changes are accomplished through ACES, the telephone registration system. Duke students who are blocked from continuing into a summer term must see their academic dean.

Courses may be added before or during the first three days of the term. After the third day of the term, no course may be added. Prior to the first day of the term, students may drop a course or courses for which they have registered without penalty. During the first three days of the term, students will be charged \$150 per course (\$75 per half-course or per audited course) for dropping a course or courses if this results in any reduction in course load for the term. With the permission of the academic dean and for compelling reasons, a course may be dropped until the end of the twentieth day of a regular summer term (eleventh day at the Marine Laboratory); the instructor then assigns a WP or WF grade. Course work discontinued without the approval of the dean will result in a grade of F. (See also the section on withdrawal charges and refunds.)

Course Load and Eligibility for Courses

Students are reminded that it is their responsibility to be certain that their course load conforms with academic requirements. The normal and expected course load in the fall or spring term is four semester courses. Students should take note that two additional semester credits are needed in order to meet the thirty-four (34) semester-course requirement for graduation. To take more than five semester courses, students must have the approval of their academic deans. No student, however, may take more than six courses in any semester. (Students matriculating prior to May 1997 should consult the bulletin of their matriculation year.)

Maximum course program for one term of the summer session is two courses, one of which may be a laboratory course. Students in the School of Engineering may enroll in two laboratory courses. In addition, a student may enroll in a physical education activity or technique/performance activity course for one-half course credit.

Eligibility for Courses. The rules established by the Graduate School provide that juniors and well-qualified sophomores may enroll in a 200-level (senior-graduate) course if they have obtained written consent of the instructor, as well as that of the director of graduate studies in the department concerned. Undergraduate students are normally not allowed to enroll in 300- or 400-level courses. Under exceptional circumstances, however, permission to do so may be granted, provided the instructor, the director of graduate studies, and the dean of the Graduate School agree.

Seniors who, at the beginning of the final term, lack no more than three semester courses toward the fulfillment of the requirements for the Bachelor of Arts or Bachelor of Science degree may enroll in graduate courses, for a maximum course load of five semester courses. Admission to the Graduate School is necessary.

Students may not register for two courses meeting at the same time. In Trinity College no course may be repeated for credit or a grade if a C- or higher has been earned previously, except where noted in the course description. Physical education activity

courses may be repeated, but without graduation credit. A course previously passed, however, may be audited.

Students who receive a D-, D, or D+ in any course in Trinity College are allowed to repeat the course at Duke. The grade earned in the repeated course as well as the grade earned originally appear on the transcript, the former identified as a repeat; both grades count in the grade point average, but the credit for only one counts toward the required number of courses for continuation and the thirty-four (34) courses required for graduation. Forms requesting to repeat a course are available in the offices of the academic deans.

Course Audit

Students who audit a course submit no daily work and take no examinations. They do not receive credit for the course. With the written consent of the instructor, a full-time degree student is allowed to audit one or more courses in addition to the normal program. Physical education activity, studio art, applied music, and dance technique/performance courses may not be audited. In the fall or spring term, a part-time degree student may audit courses by payment for each course audited. In a summer term, a student carrying two courses for credit may be given permission to audit, without additional fees, nonlaboratory courses with the above exceptions. A student in a summer term carrying less than a full program for credit may secure permission to audit (above exceptions apply) but is required to pay half the university fee for the course. After the drop/add period in any term, no student classified as an auditor in a particular course may take the course for credit, and no student taking a course for credit may be reclassified as an auditor. A student may not repeat for credit any course previously audited.

Courses may be audited by faculty members, staff, alumni, employees and their spouses, as well as spouses of currently enrolled students, and members of the Institute for Learning in Retirement; courses audited on the Microelectronics Center of North Carolina (MCNC) Network may be audited without concurrent enrollment in another course. Formal application is not necessary; written permission from the instructor must be obtained and a course card must be signed by the director of the Office of Continuing Education. Consult the chapter "Financial Information" for the appropriate fee schedule. Auditors must register on the Friday before classes begin.

Independent Study

Independent study enables a student to pursue individual research and reading in a field of special interest, under the supervision of a member of the faculty, which results in a substantive paper or report containing significant analysis and interpretation of a previously approved topic. A student—with the approval of the instructor and the director of undergraduate studies in the instructor's department—may enroll in independent study for any term at Duke. In Trinity College, instructors of independent study courses are expected to meet with the students enrolled at least once every two weeks during the fall or spring and at least once each week during a summer term. Students are expected to complete a substantive paper for the course. Independent study courses do not count toward satisfying the area of knowledge requirements.

Academic Internships

In Trinity College course credit can be earned for internships only when they include as a component an academic course of instruction. Academic internships must be offered under the auspices of an academic unit in Trinity College. Each student's internship must be sponsored by a departmental/program faculty member and approved by the director of undergraduate studies. Such internships typically draw upon work experience to investigate a research problem from one or more intellectual/disci-

plinary perspectives. They thus have an experiential component and a formal intellectual component leading to submission of a substantive research paper for evaluation. Academic internships are of two types: 1) academic internships that are required for an existing major and/or are required in programs designed to meet state teaching certification standards; 2) all other academic internships, which are considered to be electives. Only one course credit from these elective academic internships may count toward the thirty-four (34) course credits required for graduation. Further information about procedural requirements may be obtained from the academic deans.

Submission of Term Paper

Students who wish (under unusual circumstances) to submit a single paper for credit in more than one course must receive prior written permission from each course instructor. The student must indicate the multiple submission on the title page of the paper.

Declaration of Major or Division in Trinity College of Arts and Sciences

Before declaring a major in Trinity College, students work with their premajor advisors and with other members of the faculty and staff to develop a "long-range academic plan," which outlines academic objectives and plans for meeting goals. The plan should describe the proposed major program, related classroom and outside experiences, and the general pattern of elective courses, as well as the means by which the student will meet established college requirements for graduation. Although students may declare a major as early as the spring of the first undergraduate year, all students must secure formal approval of their long-range plans and must declare their majors before the last day of classes in their fourth undergraduate semester. Forms for filing the official long-range plan and for registering the initial declaration of major are available in the Premajor Advising Center.

After declaring a major, students are assigned an advisor in the department of the major and an academic dean in that division. Students who, having already declared a major, wish to change it should do so in the Office of the Registrar.

A student may declare an interdepartmental major after receiving the approval of the directors of undergraduate studies of the departments involved; they or other advisors assist the student in preparing a program of course work. The major, which must be planned early in the undergraduate career, must consist of at least ten courses, including four courses at the 100 level or above in each of at least two or more Trinity College departments or programs that offer a major. One of them should be identified as primarily responsible for the student's advising. A copy of the plan for the program, with a descriptive title, should be presented, along with the written approval of the directors of undergraduate studies, to the appropriate academic dean. A student who declares an interdepartmental major must satisfy all other requirements for Program I.

A student who wishes to declare a second major should do so in the Office of the Registrar before registering for the final term. If the student's second major is not offered within the degree to be granted for completion of the first major, a notation of the second major will appear on the transcript. Majors offered within each degree are listed below:

Bachelor of Arts. African and African-American studies, art history, Asian and African languages and literature, biological anthropology and anatomy, biology, Canadian studies, chemistry, classical languages, classical studies, comparative area studies, computer science, cultural anthropology, drama, economics, English, environmental sciences and policy, French studies, geology, Germanic languages and literature, history, Italian and European studies, linguistics, literature, mathematics, medieval and Renaissance studies, music, philosophy, physics, political science, psychology, public policy studies, religion, Russian, sociology, Spanish, visual arts, and women's studies.

Bachelor of Science. Biological anthropology and anatomy, biology, chemistry, computer science, economics, geology, mathematics, physics, and psychology.

Class Attendance, Excused Absences, and Tests

Responsibility for class attendance rests with the individual student, and since regular and punctual class attendance is expected, the student must accept the consequences of failure to attend. Instructors may refer to the student's academic dean a student who is, in their opinion, absent excessively. A student who has missed examinations or deadlines for assignments because of documented illness or authorized representation of the university off-campus may receive an official excuse or approved extension from the academic dean. Excuses are not issued for absences from class, discussion sessions, or laboratories, only for missed course work defined previously. Officials in charge of groups representing the university are required to submit the names of students to be excused to the appropriate deans' offices forty-eight hours before absences are to begin.

Class times are officially scheduled at registration unless designated "to be arranged" (TBA). No class time may be changed without prior permission of the University Schedule Committee. Within-class tests (except for the final) are to be given at the regular class meeting times. Exceptions are made for block tests that have been approved by the University Schedule Committee.

Incomplete Course Work

If because of illness, emergency, or reasonable cause a student cannot complete work for a course, the student may request in writing to his or her academic dean the assignment of an *I* (incomplete) for the course. If the request is approved by the instructor in the course and by the student's academic dean, then the student must satisfactorily complete the work prior to the last class day of the fifth week of the subsequent semester (or earlier if there is a question of the student's continuation in school; see the section on quality of work in the chapter "Degree Programs"). Professors may also establish earlier deadlines. An *I* assigned in the fall or spring semester must be resolved in the succeeding fall or spring term, respectively. If the *I* is not completed by the deadline, it will convert to an *F* grade. Once recorded, the *I* will remain permanently on the student's record, even after the final grade is assigned for the course. In addition, an *I* cancels eligibility for Dean's List and Dean's List with Distinction. If a student whose work is incomplete is also absent from the final examination, an *X* is assigned for the course (see below). A student not enrolled in the university during the semester following receipt of an *I* or *X* will have until the end of the fifth week of classes of the next semester (fall or spring) of matriculation to clear the *I*. Students may not complete work in a course after graduation.

Final Examinations and Excused Absences

The times and places of final examinations for the fall and spring terms are officially scheduled by the University Schedule Committee, generally according to the day and hour of the regular course meeting; changes may not be made in the schedule without the approval of the committee. If a final examination is to be given in a course, it will be given at the officially scheduled time. Take-home examinations are due at the regularly scheduled hour of an examination, based on the time period of the class. In fall or spring courses where final examinations are not scheduled, examinations may not be given in the last week of classes. In the summer session, final examinations are held on the last two days of each term as specified in the summer session brochure calendar. Final examinations for short courses are held on the last day of the course.

No later than the end of the first week of classes of the fall and spring term, the instructor is required to announce plans for the final examination exercise. Unless

departmental policy stipulates otherwise, the form of the final exercise is determined by the instructor. However, a final written examination may not exceed three hours in length and a final take-home examination may not require more than three hours in the actual writing.

If a student is absent from a final examination, an X is given instead of a final grade unless the student's grade in the class is failing, in which case the instructor may submit an F. The student must present an acceptable explanation for the absence to the appropriate academic dean within forty-eight hours after the scheduled time of the examination. Deferral of a final examination will not be authorized by the academic dean if it is ascertained that the student has a history of excessive absences or failure to complete course work in a timely fashion in the course in question. The X is converted to an F if the academic dean does not approve the absence. If the absence is excused by an academic dean, the student arranges with the dean and the instructor for a make-up examination to be given at the earliest possible time. It should be noted that uncleared grades of X may have significant ramifications regarding continuation in the university. (See Grading and Grade Requirements below.) An excused X not cleared by the end of the fifth week of the following semester is converted to an F. A student not enrolled in the university during that following semester has until the end of the fifth week of the next semester of enrollment to clear the X unless an earlier deadline has been established by the instructor and the academic dean.

Grading and Grade Requirements

Final grades on academic work are sent to students after the examinations at the end of each term. Midterm advisory grade reports for freshmen are issued in the fall and spring.

Passing Grades. Passing grades are A, exceptional; B, superior; C, satisfactory; P, passing (see pass/fail option below); and D, low pass. These grades may be modified by a plus or minus. A Z may be assigned for the satisfactory completion of the first term of a two-course sequence, and the final grade for both courses is assigned at the end of the second course of the sequence.

Although the D grade represents low pass, in Trinity College not more than two courses passed with D grades may be counted among those required for year-to-year continuation or among the thirty-four courses required for graduation. Courses for which a D grade is earned, however, satisfy other requirements. For information on repeating a course with a D grade, see the section on course load and eligibility for courses in this chapter.

Failing Grades. A grade of F or U (see pass/fail option below) indicates that the student has failed the course. The grade is recorded on the student's record. If the student registers for the course again, a second entry of the course and the new grade earned are made on the record, but the first entry is not removed.

Pass/Fail Option. With the consent of the instructor, a student who has declared a major may register for grading on a pass/fail basis in one elective course each semester and summer session. Courses in the major, the minor, and certificate programs cannot be taken pass/fail. Additionally, no other degree requirements, except the requirement for thirty-four course credits and the continuation requirements, may be met by a course passed under the pass/fail option, unless the course is offered only on that basis. Preceptorials, discussion sections, seminars, and tutorials may not be taken on the pass/fail basis, unless the course is offered only on that basis.

After the drop/add period in any term, no changes from pass/fail to regular status, or from regular to pass/fail status, are permitted in any course. A P may not be converted subsequently to a regular letter grade, and the course may not be retaken under the regular grading system.

Grades When Absent from Final Examination. See the section on final examination and excused absences in this chapter.

Effects of Incomplete Work. For purposes of determining satisfactory progress each term and toward graduation, incomplete work in a course indicated by a grade of *I* or *X* is considered a failure to achieve satisfactory performance in that course. Furthermore, an incomplete during the academic year cancels eligibility for semester honors; i.e., Dean's List and Dean's List with Distinction. (See the section on incomplete work in this chapter.)

WP, WF, and W Grades, and WE Designation. *WP* and *WF* grades may be issued if a student withdraws from a course after the drop/add period. (See the sections on course changes in this chapter.) *W* grades are issued if a student withdraws from the university before the last four weeks of regular classes in the fall or spring semester, or before the last two weeks of classes in a regular summer term. (See the section on withdrawal and readmission in this chapter.)

WE indicates correction of an error in registration. It is not a grade.

Continuation

Students must achieve a satisfactory record of academic performance each term and make satisfactory progress toward graduation each year to continue in the college. Students who fail to meet the minimum requirements to continue must leave the college for at least two semesters. (A summer session may be counted as a semester.) Those desiring to return after the dismissal period may apply to Trinity College of Arts and Sciences for readmission. If, after readmission, the student fails again to meet minimum requirements, the student will be ineligible, except in extraordinary instances, for readmission to the college. Students admitted to degree programs from Continuing Education should consult their academic deans concerning continuation.

Satisfactory Performance Each Term (Semester Continuation Requirements). A student who does not receive a passing grade in all courses must meet the following minimum requirements or be withdrawn from the college.

In the Fall or Spring Semester: (1) in the first semester of enrollment at Duke, a student must pass at least two semester courses; (2) after the first semester at Duke, a student must pass at least three semester courses; (3) a student taking an authorized underload after the first semester at Duke must earn all passing grades. Students may not carry an underload without the permission of their academic dean. For the purposes of continuation, incomplete work in any course is considered a failure to achieve satisfactory performance in that course. Therefore, where continuation is in question, incomplete work in any course must be completed with a passing grade in time for final grades to be submitted to the Office of the Registrar no later than the weekday preceding the first day of classes of the spring semester, or prior to the first day of classes of the second term of the summer session, as appropriate. In the case of incomplete work in the spring semester, this requirement applies whether or not the student plans to attend one or more terms of the summer session. The student, however, may not enroll in a summer term at Duke unless the requirement of satisfactory performance each semester has been met.

In the Summer Session: to maintain enrollment at Duke a student may not fail more than one full course in a summer term or a summer session. For purposes of continuation, incomplete work is considered failure to achieve a satisfactory performance in that course. Therefore, when eligibility to continue from the summer session to the fall is in question, incomplete courses must be satisfactorily completed in time for a passing grade to be submitted to the Office of the Registrar no later than the weekday preceding the first day of fall classes. Moreover, no student may enter the fall semester with more than one incomplete grade from the preceding spring and summer.

Any student excluded from the college under the provisions of these regulations may on request have the case reviewed by the senior associate dean of Trinity College of Arts and Sciences.

Satisfactory Progress Toward Graduation (Annual Continuation Requirements). Each year prior to the beginning of fall term classes, a student must have made satisfactory progress toward fulfillment of curricular requirements to be eligible to continue in the college; i.e., a certain number of courses must have been passed at Duke according to the following schedule:

To be eligible to continue to the	A student must have passed
2nd semester at Duke	2 semester courses at Duke
3rd semester at Duke	6 semester courses at Duke
4th semester at Duke	10 semester courses at Duke
5th semester at Duke	14 semester courses at Duke
6th semester at Duke	19 semester courses at Duke
7th semester at Duke	22 semester courses at Duke, plus two additional courses*
8th semester at Duke	26 semester courses at Duke, plus two additional courses*

For students who have interrupted their studies at the university, the continuation requirement must still be satisfied before the beginning of each fall term. For such students, the number of courses needed to satisfy the continuation requirement is determined from the table above, based on which semester they will enter in the fall term.

Courses taken in the summer term at Duke may be used to meet this requirement; except as noted,* advanced placement may not be used to satisfy it. No more than two courses completed with *D* grades may be counted toward fulfilling this annual continuation requirement.

Academic Warning and Probation

A student whose academic performance satisfies continuation requirements (see above), but whose record indicates unsatisfactory scholarship will be subject either to academic warning or academic probation. Failure to clear probationary status in the semester of probation will result in a student's dismissal for academic reasons. (See the preceding section on continuation for information concerning dismissal.) Students admitted to degree programs from Continuing Education should consult their academic deans concerning warning and probation.

Academic Warning. A student who receives a single grade of *F* or a second *D* will be issued an academic warning by the academic dean.

Academic Probation. For a student enrolled in a normal course load (of at least four semester courses), the following grades will result in academic probation for the succeeding semester: during the first semester of the freshman year, grades including *DD*, *DF*, or *FF*; during any subsequent semester, grades including *DDD* or *DF*; and during two consecutive semesters, grades including *DDDD*, *DDDF*, or *DDFF*. For a student enrolled in an authorized underload (i.e., fewer than four course credits), the following academic performance will result in academic probation: during the first semester of the freshman year, grades of *DD* or *DF*; during any subsequent semester, grades including *DD*; and during two consecutive semesters, grades including *DDDD* or *DDDF*.

*The additional semester courses may be earned through advanced placement and/or transferred courses.

The probation status will be reflected on those academic records used for internal purposes only. Students placed on academic probation must acknowledge their probationary status in writing to their academic dean in order to continue in the college. They are also expected to seek assistance from campus resources, have their course selection approved by their academic deans, and meet periodically with them. Students are expected to clear their probationary status during the semester of probation. In order to do so, they must enroll in four full-credit courses, of which no more than one may be taken on a pass/fail basis. Grades of C-, P, or better must be earned in each course, or a C average must be achieved in that semester.

Probationary status cannot be cleared in a semester in which students seek permission and are allowed to withdraw to an underload. In such cases, the probationary status continues through the next semester of enrollment or in both terms of the summer session. Students on probation, whether in a normal load or an underload, are required to meet continuation requirements. Students whose probationary status for reason of an underload continues to a second semester must adhere to the conditions and standards previously outlined for clearing probation. Failure to do so will result in academic dismissal.

Changes in Status

Withdrawal and Readmission. Students who wish to withdraw from the college must give official notification to their academic dean. Notification must be received prior to the beginning of classes in any term or tuition will be due on a pro rata basis. (See the section on refunds in the chapter "Financial Information.") For students withdrawing on their own initiative after the beginning of classes and prior to the last four weeks of regular classes in the fall or spring term, or before the last two weeks of regular classes in a summer term, a W is assigned in lieu of a regular grade for each course. After these dates an F grade is recorded unless withdrawal is caused by an emergency beyond the control of the student, in which case a W is assigned by the student's academic dean.

Students may be involuntarily withdrawn for academic reasons, financial reasons, and violation of academic regulations. The expectations pertaining to each are found in the chapters "Degree Programs," "Financial Information," and this chapter, "Academic Procedures and Information."

Applications for readmission are made to the appropriate school or college. Each application is reviewed by officers of the school or college to which the student applies, and a decision is made on the basis of the applicant's previous record at Duke, evidence of increasing maturity and discipline, and the degree of success attendant upon activities during the time away from Duke. Students who are readmitted usually cannot be housed on campus.

Applications for readmission must be completed by November 1 for enrollment in the spring, by April 1 for enrollment in the summer, and by July 1 for enrollment in the fall.

Leave of Absence. An upperclassman in good standing may apply in writing to the appropriate academic dean to take a leave of absence for one or two semesters; the deadline for application for a leave is the end of the registration period in the semester immediately preceding the leave. Students returning from approved medical, financial, personal, or study abroad leaves and desiring housing on campus will be placed in the general housing lottery, provided they have submitted the appropriate information to the Office of Residential Life by their published deadline noted above and provided that they lived on campus before taking their approved leave. Unless an exception for an emergency is authorized by the students' academic deans, students applying after the course registration cited above will lose their priorities in university housing for the period following the leave.

Registration materials will be mailed to a student on leave, but final registration is, of course, contingent upon the student's fulfilling the terms of the leave. A student failing to register while on leave will be withdrawn from the university and will have to apply for readmission.

A student who undertakes independent study under Duke supervision and for Duke credit is not on leave of absence even if studying elsewhere. The student registers at Duke as a nonresident student and pays the appropriate fees or tuition at Duke. This also applies to Duke programs conducted away from the Durham campus.

Transfer between Duke University Schools. Students in good standing may be considered for transfer from one Duke undergraduate school or college to another, upon written application and request for a letter of recommendation from their academic dean. The review of requests to transfer involves consideration of a student's general academic standing, citizenship records, and relative standing in the group of students applying for transfer. The school or college to which transfer is sought will give academic counseling to a student as soon as intention to apply for transfer is known, although no commitment will be implied. A student may apply to transfer at any time prior to receiving a baccalaureate degree. A student transferring to Trinity College of Arts and Sciences from the School of Engineering, prior to receiving a baccalaureate degree, may not use more than six professional school credits toward the Bachelor of Arts or Bachelor of Science degree. If admitted after having earned a baccalaureate degree, a student must complete in Trinity College a total of seventeen additional courses. Transfer credit, AP credit, or courses previously used to satisfy requirements for the degree in engineering cannot be counted.

Full-Time and Part-Time Degree Status. Candidates for degrees are expected to enroll in a normal course load (i.e., at least four semester courses) each semester. Students matriculating before May 1997 should consult the bulletin of the year they matriculated for information and guidelines concerning part-time status. (Part-time students may register for not more than two courses or two courses and a half-credit physical education activity and may not live in university housing.) Degree candidates who matriculated through Continuing Education or are employees should confer with their academic deans about course load requirements.

Resident and Nonresident Status. See the chapter "Campus Life and Activities."

Nondegree to Degree Status. A nondegree student must apply to the Office of Undergraduate Admissions for admission to degree candidacy.

The Provision of Academic Information to Parents and Guardians

Duke University complies with the policies set forth in the Family Educational Rights and Privacy act of 1974 concerning confidentiality, privacy, and release of information as they pertain to students' educational records. It is primarily the responsibility of students to keep parents and guardians informed of their academic standing and progress as well as any difficulties which may affect their performance. The Office of the Registrar sends grade reports to students at the end of each term and midterm reports to first-year students and their parents or guardians. Additionally, other available information is provided routinely to parents and guardians of undergraduates by the Office of the Dean. They are sent copies of correspondence to students notifying them of changes in their academic standing or regarding unsatisfactory performance which may lead to academic dismissal or the necessity of attending summer school. Parents and guardians may also be alerted to emergency and extraordinary situations which may impinge upon a student's well being.

Academic Recognition and Honors

In determining a student's eligibility for academic recognition and honors, only grades earned in Duke courses, including those earned in Duke Study Abroad programs and in courses covered by the interinstitutional agreement are considered (see index).

Dean's List accords recognition to academic excellence achieved during each semester. To be eligible for this honor, undergraduates must earn a grade point average placing them in the highest one third of undergraduates and in addition must: (1) carry a normal academic load; 2) earn grades other than *P* in at least three semester courses; and 3) receive no incomplete or failing grades. Undergraduates who in addition earn grade point averages that place them in the highest ten percent of undergraduates will receive the Dean's List with Distinction honor, while the remainder of those placing in the highest one third of undergraduates will receive the Dean's List honor as noted above.

Graduation with Distinction accords recognition to students who achieve excellence in their major area of study as determined by the departments and as approved by the Committee on Honors of the Arts and Sciences Council. All academic units offering a major have procedures for obtaining a graduation with distinction, as does Program II. This recognition is separate and distinct from Latin Honors (see below). Interested students should consult the relevant directors of undergraduate study or Program II dean responsible for specific requirements of and eligibility for graduation with distinction. In general, majors in departments and programs seeking to graduate with distinction will participate during their junior and/or senior years in a seminar and/or a directed course of reading, laboratory research, or independent study which results in substantive written work. Each student's overall achievement in the major or in Program II, including the written work, is assessed by a faculty committee. In Program II this committee is established by the directors of undergraduate study in the units concerned. Graduation with distinction may be awarded according to three levels: highest distinction, high distinction, distinction.

Latin Honors By Overall Academic Achievement accord recognition for academic excellence achieved over the duration of an entire undergraduate career.

For students matriculating in fall 1997 and thereafter: Unlike the Dean's List honor which recognizes academic excellence achieved over the short term, eligibility for the three categories of Latin Honors (*summa cum laude*, *magna cum laude*, and *cum laude*) is based on the cumulative grade point average. Recipients are determined by the following procedure: The grade point average included within the highest five percent of the previous year's graduating class is used to specify the grade point average needed by those students of the current graduating class to be awarded the *summa cum laude* honor. The grade point average included within the next highest ten percent of the previous year's graduating class is used to determine the grade point average needed by those students who will graduate with the *magna cum laude* honor. Finally, the grade point average included within the next ten percent of the previous year's graduating class will be used to determine those students eligible for graduating with the *cum laude* honor.

For students who matriculated after May 1988 through January 1997: Students in this category should review the description of Latin Honors in the bulletin of the year they matriculated at Duke.

OTHER HONORS

Phi Eta Sigma. Elections to the national freshman honorary society, Phi Eta Sigma, are made at the end of the fall and spring semesters. Students who earn a 3.5 average in four or more semester courses in their first semester of enrollment, or those whose

cumulative average at the end of their second semester is 3.5 or above in a program of eight or more semester courses, are invited to membership.

Phi Beta Kappa. Phi Beta Kappa, the national academic honor society founded at William and Mary on December 5, 1776, elects undergraduate students in Trinity College and the School of Engineering each fall and spring. Eligibility for election is determined not by the university but by the bylaws of the local chapter (Beta of North Carolina) on the basis of outstanding academic achievement and high moral character. Reviews of the academic record of all prospective candidates are conducted in the junior and senior years. The academic record must not contain an unresolved incomplete (I). For early election, students must have completed at least eighteen but fewer than twenty-four graded courses taken at Duke. Regular election requires at least twenty-four graded courses taken at Duke. Transfer students and other students who do not qualify under the preceding requirements may be eligible for deferred election; such students must also have achieved a superior academic record in graded courses at Duke, especially over the last sixteen courses. The total number of persons elected annually is limited by chapter bylaw to 10 percent of the graduating class, of whom no more than one percent can be selected by early election. Eligibility requires a course of study with the breadth that characterizes a liberal education. The Program I curriculum meets those expectations; Program II and Engineering students must demonstrate comparable breadth in order to be eligible. Inquiries concerning distribution requirements for students in the School of Engineering should be directed to Professor Rhett George, Department of Electrical Engineering. All other inquiries may be directed to the Secretary of Phi Beta Kappa, Box 99352, Duke Station, Durham, North Carolina 27708.

Golden Key. Membership to the national academic honors organization, the Golden Key National Honor Society, is by invitation to the top 15 percent of university juniors and seniors in all fields of study. Chapter activities are service and interaction oriented. All members are encouraged to become active participants. Scholarships are awarded annually. A national network for career assistance is available to members. Inquiries may be directed to Dr. Caroline Lattimore, Duke chapter advisor, Box 90739, Duke University, Durham, NC 27708.

Tau Beta Pi. Elections to the national engineering honor society, Tau Beta Pi, are held in the fall and spring. Eligibility is determined on the basis of distinguished scholarship and exemplary character. Engineering students whose academic standing is in the upper eighth of the junior class or the upper fifth of the senior class have earned consideration by their local chapter. Inquiries may be directed to the Advisory Board, Tau Beta Pi, School of Engineering, Box 90271, Duke University, Durham, North Carolina 27708.

International Postgraduate Scholarships. Students interested in various prestigious fellowships for graduate study (for example, the Fulbright, Luce, Marshall, Rhodes, and Winston Churchill) should consult the academic dean in charge of fellowships, 04 Allen Building. Specific information about deadlines and procedures is available through that office.

Notification of Intention to Graduate

The Diploma Card for students in Trinity College of Arts and Sciences and the School of Engineering is official notification that they expect to have completed all requirements for the degree and to receive the diploma on a particular graduation date. It is the responsibility of students to file the card on or before established deadlines. For students in Trinity College, the cards, to be filed during the fall registration period, are available in the college recorder's office; in the School of Engineering, the dean's office.

Commencement

Graduation exercises are held once a year in May when degrees are conferred upon and diplomas are issued to those who have completed degree requirements by the end of the spring term. Those who complete the requirements by the end of the summer term or by the end of the fall term receive diplomas dated September 1 or December 30, respectively. There is a delay of one month to two months in the mailing of September and December diplomas because diplomas cannot be issued until they are approved by the Academic Council and the Board of Trustees.

Prizes and Awards

The achievements of undergraduate students are recognized in various fields of activity. The following prizes suggest the range of recognition. According to current university policy, some of the scholarships listed must be awarded in honorary form unless the students chosen are on financial aid, in which case the scholarships will be incorporated in the winners' financial packages. These scholarships are identified by an asterisk (*).

The Edward H. Benenson Awards in the Arts. These awards of \$300 to \$3,000 are granted annually through the generosity of Duke alumnus and trustee Edward H. Benenson. Funds are awarded for fees, equipment, supplies, travel, production, and other educational expenses for projects in art, music, drama, dance, creative writing, and film/video proposed by undergraduates and graduating seniors of Trinity College and the School of Engineering. Application forms and instructions are available in February from the Institute of the Arts, 109 Bivins Building.

The Louis Sudler Prize in the Arts. An award is presented annually by the Institute of the Arts to a graduating senior who, in the opinion of a special institute committee, has demonstrated the most outstanding achievement in artistic performance or creation. The prize of \$1,000 was established in 1983 through the generosity of Louis C. Sudler, Chicago, Illinois.

The Sirenn WuDunn Memorial Scholarship Fund. This fund was created by the family and friends of Sirenn WuDunn. An award is made annually to a student who best embodies Sirenn's ideals and interests and who has demonstrated academic excellence and an interest in Asian culture.

The Edward C. Horn Memorial Prize for Excellence in Biology. Given each year to a graduating biology major who has shown, in the opinion of the zoology faculty, the highest level of academic achievement and promise, this prize is offered in memory of Professor Edward C. Horn. It is a tribute to his warm regard for students and faculty and his appreciation of scholarly excellence. The prize consists of books appropriate to the student's field of interest.

CRC Outstanding Freshman Chemistry Award. A copy of the *Chemical Rubber Company's Handbook of Chemistry and Physics* is awarded annually to a freshman student in chemistry. The basis for selection by a faculty committee is academic excellence.

American Chemical Society Undergraduate Award in Analytical Chemistry. This prize is given annually by the Analytical Division of the American Chemical Society to an undergraduate student in analytical chemistry. The basis for selection is academic excellence and laboratory proficiency. The prize is a subscription to the journal *Analytical Chemistry* published by the American Chemical Society.

North Carolina Institute of Chemists Award. This prize is awarded annually to a graduating senior who has demonstrated a record of leadership and scholastic achievement and who has shown potential for advancement of the chemical and chemical engineering profession.

The Chemistry Department Award. This prize is awarded annually to an outstanding senior chemistry major in the Bachelor of Science degree program. The basis for selection is the student's independent research and interest in pursuing advanced work in chemistry. The award is a one-year membership in the American Chemical Society and a one-year subscription to an appropriate journal.

The Merck Index Award. This prize is awarded annually to one or more graduating chemistry majors intending to pursue a career in medicine. Selection, by a faculty committee, is based on scholastic excellence. The prize consists of a copy of the Merck Index presented by Merck and Co., Inc.

The Hypercube Scholar Award. This prize is awarded annually to an outstanding senior chemistry major in the bachelor of science program. Selection, by a faculty committee, is based on the student's scholastic achievement, performance in independent study, and interest in pursuing advanced work in

a field of chemistry which utilizes molecular modeling extensively. The prize consists of a molecular modeling computer software package presented by *Hypercube, Inc.*

The David Taggart Clark Prize in Classical Studies. This prize derives from income earned on the generous bequest (1956) of Professor David Taggart Clark, classicist and economist. It is awarded to the senior major in classical studies or classical languages who is judged to have written the best honors essay of the year, and consists of an important book or books in the field of classics.

The James B. Rast Memorial Award in Comparative Anatomy. The parents and friends of James Brailsford Rast, a member of the Class of 1958 of Duke University, endowed this award in his memory. The award, consisting of the *Atlas of Descriptive Human Anatomy* by Sobotta and bearing the James B. Rast Memorial bookplate, is given annually to the student who demonstrates the greatest achievement in the study of comparative anatomy.

John M. Clum Distinguished Drama Graduate Award. This award is named for the distinguished founder of the Duke University Drama Program. The award recognizes an outstanding graduating senior who has made extraordinary contributions to the life of the program, and who has exhibited outstanding personal and professional qualities.

The Reynolds Price Award for Script-writing. This award is presented annually by the Drama Program to a Duke undergraduate for the best original script for stage, screen, or television.

The Augusto Lentricchia Award for Excellence in Directing. A prize of \$250 is awarded annually to an undergraduate of Duke University for sustained excellence in directing for the stage or screen. The award is sponsored by the Drama Program through a continuing gift from Frank Lentricchia, who named the award in memory of his paternal grandfather, a man of few, but penetrating words, and a keenly observant and extraordinarily disciplined poet.

The Tommaso Iacovella Award for Excellence in Acting. A prize of \$250 is awarded annually to an undergraduate of Duke University for sustained excellence in acting for the stage or screen. The award is sponsored by the Drama Program through a continuing gift from Frank Lentricchia, who named the prize in memory of his maternal grandfather, a captivating and exuberant storyteller who inspired him with his charismatic and surprising stories.

Dasha Epstein Award in Playwriting. This award is made to a current third-year Duke student with demonstrated promise in playwriting. It covers the costs of the student's attending the two-week National Playwrights Conference held each summer at the Eugene O'Neill Theater Center in Waterford, Connecticut.

The Winfred Quinton Holton Prize in Primary Education. This prize was established in 1922 by gifts of Holland Holton, Class of 1907, and Lela Young Holton, Class of 1907, in memory of their son, Winfred Quinton Holton, with the income to be used to provide a prize for investigative work in primary education. This prize may be made annually. Competition is open to Duke seniors and graduate students who are eligible to obtain certification to teach. A student who wishes to be considered for the prize must submit a paper to be judged by a faculty committee in the Program in Education.

The Robert J. Niess/Alexander Hull Award in French. Given each year to an outstanding French major in honor of Robert J. Niess, professor of French at Duke University from 1972 to 1981 and Alexander Hull, associate professor of French at Duke University from 1962 to 1993.

The William T. Laprade Prize in History. This prize is offered in honor of William T. Laprade, who was a member of the Department of History at Trinity College and Duke University from 1909 to 1953, and chairman of the department from 1938 to 1952. It is awarded to a senior who is being graduated with distinction and whose senior essay in history has been judged to be unusually meritorious.

The Bascom Headen Palmer Literary Prize. This prize was established in honor of Bascom Headen Palmer's achievement as recipient of the Hesperian Literary Society Medal in 1875, his senior year in Trinity College. It recognizes the best senior honors thesis in literary study each year.

Julia Dale Prize in Mathematics. This award was established in 1938 by the friends and relatives of Julia Dale, an assistant professor of mathematics at Duke University who died early in her career. The annual cash award is given through the Department of Mathematics to one or more undergraduate students in recognition of excellence in mathematics.

Karl Menger Award. This award was established in 1989 by relatives of distinguished twentieth-century mathematician Karl Menger. The annual cash award is given through the Department of Mathematics in recognition of outstanding performance in mathematical competitions.

The Henry Schuman Music Prize. A prize of \$350 is awarded annually to an undergraduate of Duke University for an original composition or a distinguished paper in music history or analysis. The award

is sponsored by the Department of Music through a continuing gift from Dr. and Mrs. James H. Semans, who named the prize after Henry Schuman, a lifelong friend of the Semans and Trent families, a talented amateur violinist, and one who helped to build valued collections in the Duke library.

Giorgio Ciompi Scholarships. Named for the founder of the Ciompi String Quartet, Duke University's quartet in residence, these music scholarships are given to students who can demonstrate talent and achievement on a string instrument. Although recipients need not major in music, they are required to study privately. These scholarships cover fees for applied instruction.

The Smith Memorial Scholarship. This scholarship of up to \$2,000, in memory of Marvin Boren and Elvira Lowe Smith, is awarded to an organist who is an undergraduate music major or a graduate student in performance practice. It is renewable as long as the recipient continues to study the organ and maintains satisfactory progress.

Keyboard Classics Magazine Scholarship. This music scholarship of \$1,000 is awarded on the basis of merit to an entering pianist. It is renewable annually as long as the recipient is registered for applied piano study and is making satisfactory progress.

The Larry and Violet H. Turner Scholarship. Established by a gift of Larry Turner, class of 1935, the scholarship is given to an undergraduate demonstrating outstanding ability on a string instrument. Although recipients need not major in music, they are required to study privately. The scholarship covers fees for private instruction.

Sheet Music Magazine Scholarships. Two music scholarships of \$750 each are offered annually to entering first-year instrumentalists on a competitive basis. Enrollment in applied music (in the principal instrument) and participation in a departmental ensemble are required. The awards are renewable for up to four years as long as these requirements are met and progress is satisfactory.

The Julia Wilkinson Mueller Prize for Excellence in Music. An award of \$300 will be presented to a graduating senior for achievement in musical performance.

Robert S. Rankin Political Science Awards

Award in American Government and Constitutional Law. An award to the outstanding student in the field of American government and constitutional law. A prize of at least \$150 is donated by a former student of Professor Rankin's, Judge Jerry B. Stone, A.B. '44, J.D. '48.

Award in American National, State, and Local Governments. An award to the outstanding student in the field of American national and/or state and/or local governments. A prize of at least \$100 is also donated by Judge Stone.

American Government Award for Leadership and Academic Achievement. One or more awards have been donated by Robert H. Connelly, Professor Emeritus of Public Law and Government at Columbia University, and from 1949-65 a colleague of Professor Rankin's when both were members of the Duke faculty, and by a group of Professor Rankin's former students. These awards are given to students, chosen by the Department of Political Science, who have demonstrated excellence in the study of American government and whose past achievements and future promise manifests not only high intellectual attainments, but also an exemplary leadership role in service to Duke University or to the community as broadly defined.

Alona E. Evans Prize in International Law. An annual award to an undergraduate and/or graduate student in arts and sciences whose paper(s) on international law reflect(s) excellence in scholarship. Substantial money prizes are derived from income earned on the generous bequest of Professor Alona E. Evans, A.B. '40, Ph.D. (political science) '45.

Elizabeth G. Verville Award. An annual award to the undergraduate who submits the best paper in the subject matter of political science. Funds for the award of \$100 are derived from a gift by Elizabeth G. Verville, a political science major, A.B. '61.

The Marguerite (Mimi) Voorhees Kraemer Award. This annual award was created by the family and friends of Mimi Voorhees, a public policy studies major, class of 1979. It recognizes a PPS student who has demonstrated strong leadership qualities and a commitment to public service. This award is given to a junior as a scholarship to help defray the costs of participating in the summer internship program.

The Joel Fleishman Distinguished Scholar Award. This award is presented annually by the Sanford Institute of Public Policy, recognizing the graduating major with the highest academic achievement in public policy.

The Terry Sanford Departmental Award. This award is presented annually by the Sanford Institute of Public Policy to the graduating major recognizing his/her achievement in leadership.

The Karl E. Zener Award for Outstanding Performance of a Major in Psychology. The Karl E. Zener Award is given to psychology majors who have shown outstanding performance and scholarship. The award, based on the student's total grade record and a paper submitted to the award committee, consists of a monetary prize and inclusion by name on a memorial plaque in Zener Auditorium.

Chester P. Middleworth Awards. These awards were established to encourage and recognize excellence in research and writing by Duke students in their use of primary source materials held by the Special Collections Library. Two cash awards are made annually to undergraduates through the Special Collections Library, which is housed within Perkins Library.

The Richard L. Predmore Award in Spanish. Given each year to an outstanding Spanish major in honor of Richard L. Predmore, professor of Spanish at Duke University from 1950-1978 and dean of the Graduate School from 1962-1969.

The William Senhauser Prize. Given by the mother of William Senhauser in memory of her son, a member of the Class of 1942, who gave his life in the Pacific theater of war on August 4, 1944. This award is made annually to the student in Trinity College of Arts and Sciences or the School of Engineering who has made the greatest contribution to the university through participation and leadership in intramural sports. The winner of this prize is chosen by a committee appointed by the president of the university.

Kevin Deford Gorter Memorial Endowment Fund. This fund was created by the family of Kevin Deford Gorter to assist, promote, and expand the Sport Clubs program at Duke University. An award is made annually to the student who has made the greatest contribution to the program and best exemplifies the purposes of Sport Clubs at Duke University.

***The William M. Blackburn Scholarship.** This fund was established in 1962 to honor William Blackburn, distinguished teacher of writing at Duke. The scholarship, awarded by the Department of English, recognizes outstanding achievement in the field of creative writing.

The Anne Flexner Memorial Award for Creative Writing. This award was established by the family and friends of Anne Flexner, who graduated from Duke in 1945. Open to all Duke undergraduates, the competition for prose fiction (5,000-word limit) and poetry (200-line limit) is sponsored in the spring semester by the Department of English. Entries are judged by the department's Committee on Creative Writing; awards range from \$200 to \$500.

The Rudolph William Rosati Fund. Established in 1978 by Mr. W. M. Upchurch, Jr., this fund honors the memory of his friend, the late Mr. Rosati, a talented writer. Awards are given to encourage, advance, and reward creative writing among undergraduate students. A committee named by the provost oversees the program and distribution of the fund.

***The Margaret Rose Knight Sanford Scholarship.** This fund was established in recognition of the untiring efforts of Margaret Rose Knight Sanford on behalf of Duke University. The scholarship is awarded to a female student who demonstrates particular promise in creative writing. Awards are made by the Department of English.

***The Francis Pemberton Scholarship.** This award was created by the trustees of the Mary Duke Biddle Foundation in memory and in honor of Francis Pemberton's service to the Biddle Foundation. The scholarship is awarded by the Department of English to a junior or senior pursuing the study of creative writing.

***The E. Blake Byrne Scholarship.** This fund was created in 1986 by E. Blake Byrne (Trinity College, Class of 1957). The award is made by the Department of English to rising juniors with demonstrated talent in creative writing.

The Raymond D. Lublin, M.D. Premedical Award. This award to an outstanding graduating senior who will be attending medical school and who has excelled in both science and non-science areas of the curriculum was established in the name of an honored physician and surgeon by his wife, Mrs. Raymond D. Lublin.

The Walter J. Seeley Scholastic Award. This award is presented annually by the Engineers' Student Government to that member of the graduating class of the school who has achieved the highest scholastic average in all subjects, and who has shown diligence in pursuit of an engineering education. The award was initiated to honor the spirit of academic excellence and professional diligence demonstrated by the late Dean Emeritus Walter J. Seeley. It is hoped that this award will serve as a symbol of the man and the ideals for which he stood. The name of the recipient is inscribed on a plaque displayed in the Engineering Building.

The American Society of Civil Engineers Prize. The prize is awarded annually by the North Carolina Chapter of the American Society of Civil Engineers to two outstanding civil engineering seniors, upon

recommendation of the faculty of the civil engineering department. The basis for selection is the student's scholastic record, contribution to the student chapter, and participation in other college activities and organizations. The prize consists of a certificate of award and the payment of one year's dues in the American Society of Civil Engineers.

The George Sherrerd III Memorial Award in Electrical Engineering. This award is presented annually to the senior in electrical engineering who, in the opinion of the electrical engineering faculty, has attained the highest level of scholastic achievement in all subjects and has rendered significant service to the School of Engineering and the university at large. The award was established in 1958 by the parents of George Sherrerd III, a graduate of the Class of 1955, to recognize outstanding undergraduate scholarship. Recipients receive a monetary award, and their names are inscribed on a plaque displayed in the Engineering Building.

The Charles Ernest Seager Memorial Award. This award recognizes outstanding achievement in the annual Student Prize Paper Contest of the Duke branch of the Institute of Electrical and Electronics Engineers or significant contributions to electrical engineering. The award, established in 1958 by the widow and friends of Charles Ernest Seager, a graduate of the Class of 1955, consists of inscribing the name of the contest winner on a plaque displayed in the Engineering Building.

The Milmo Prize. This prize is awarded annually to students from North or South Carolina graduating in the Department of Electrical Engineering, who, in the opinion of the faculty of that department, and, as shown by their grades, have made the most progress in electrical engineering during the last year in school. The prize consists of a certificate of award and one year's payment of dues in the Institute of Electrical and Electronics Engineers for the membership year in which the honoree is awarded the baccalaureate degree.

The Raymond C. Gaugler Award in Materials Science and Engineering. This award is presented annually to the senior who has made the most progress at Duke in developing competence in materials science or materials engineering. The basis for selection is the student's scholastic record, research, or design projects completed at Duke, and interest in a materials-related career. The award has been established by Patricia S. Pearsall in memory of her grandfather, Raymond C. Gaugler, who was president of the American Cyanamid Company prior to his death in 1952.

The American Society of Mechanical Engineers Award. This award is presented annually to a senior in mechanical engineering for outstanding efforts and accomplishments in behalf of the American Society of Mechanical Engineers Student Section at Duke. The award consists of a certificate of recognition.

The School of Engineering Student Service Award. This award, established in 1978, is given to those graduating seniors who, by their contributions of time, effort, and spirit, have significantly benefited the community of the School of Engineering. The names of the recipients are inscribed on a plaque displayed in the Engineering Building.

The T.C. Heyward Scholarship Award. This award is presented annually to an outstanding senior in mechanical engineering at Duke University. The recipient is chosen by a committee of the mechanical engineering faculty and selection is based on academic excellence, engineering ability, and leadership. The recipient receives a monetary award and his or her name is inscribed on a plaque displayed in the Engineering Building.

The William Brewster Snow Award in Environmental Engineering. This award is presented to an outstanding senior in civil engineering who, through superior academic achievement and extracurricular activities, has demonstrated interest and commitment to environmental engineering as a career. Selection of the recipient is made by the civil engineering faculty. The recipient is presented with an inscribed plaque and his or her name is also inscribed on a plaque permanently displayed in the Engineering Building.

The Otto Meier, Jr. Tau Beta Pi Award. This award was established in recognition of Dr. Meier's leadership in establishing the North Carolina Gamma Chapter in 1948 and his continuous service as chapter advisor until 1975. This award is given annually to the graduating Tau Beta Pi member who symbolizes best the distinguished scholarship and exemplary character required for membership. The name of the recipient is inscribed on a plaque displayed in the Engineering Building.

The da Vinci Award. This award is presented by a faculty committee of the Department of Biomedical Engineering to the biomedical engineering senior with the most outstanding academic record. This award commemorates the contributions of Leonardo da Vinci in laying the foundations for the study of biomechanics.

The von Helmholtz Award. This award is presented by a faculty committee of the Department of Biomedical Engineering to the biomedical engineering senior who has made the most outstanding

contribution to the department. This award commemorates the work of von Helmholtz in laying the foundations of biomedical engineering.

Aubrey E. Palmer Award. This award, established in 1980, is presented annually by the faculty of the Department of Civil and Environmental Engineering to a civil engineering senior in recognition of outstanding academic achievement. The award consists of a certificate of recognition and the name of the recipient inscribed on a plaque displayed in the Engineering Building.

The Mechanical Engineering and Materials Science Faculty Award. This award is presented annually in recognition of academic excellence to the graduating mechanical engineering senior who has attained the highest level of scholastic achievement in all subjects. The name of the recipient is inscribed on a plaque displayed in the Engineering Building.

Education Records

Duke University adheres to a policy permitting students access to their education records and certain confidential financial information. Students may request review of any information which is contained in their education records and may, using appropriate procedures, challenge the content of these records. An explanation of the complete policy on education records may be obtained from the registrar's office.

No information, except directory information (see below) and notices about academic progress to parents and guardians, contained in any student records is released to persons outside the university or to unauthorized persons on the campus, without the written consent of the student. It is the responsibility of the student to provide the Office of the Registrar and other university offices, as appropriate, with the necessary specific authorization and consent.

Directory information includes name, addresses, e-mail addresses, telephone listing, photograph, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and most recent previous educational institution attended. This information may be released to appear in public documents and may otherwise be disclosed without student consent unless a written request not to release this information is filed in the Office of the Registrar by the end of the first week of classes each term.



*Special Study Centers, Programs, and
Opportunities*



Campus Centers and Institutes

INTERNATIONAL AND AREA STUDIES PROGRAMS

Center for International Studies. The university's Center for International Studies promotes, coordinates, and supports a wide array of research and teaching activities on international issues in Arts and Sciences and the professional schools. Faculty associated with the center come from diverse disciplines and reflect a wide range of intellectual interests. Their primary bond is a concern with peoples, events, movements, and institutions outside the United States; relations among nations; and activities and institutions in the United States that affect the rest of the world. The center fosters the belief that comparative knowledge and understanding of other cultures and societies are essential for an appreciation of the world in which we live and deserve primary emphasis in teaching and research in the university.

The functions of the center are to provide focus, structure, and support to the research efforts of associated scholars and to serve as a catalyst for the coordination of varied research undertakings. It also assists in dissemination of these undertakings and fosters international activities in educational, research, and governmental institutions in the local area and in the southeastern United States.

The Center for International Studies is involved in monitoring and initiating change in the international curricula of the undergraduate, graduate, and professional schools of the university. It has a special interest in undergraduate education and, through a variety of programs and activities, makes a contribution to the undergraduate academic experience. It seeks to attract students to the wide range of international and comparative courses available, and it offers awards to rising sophomores for summer travel and research overseas. In recognition of the excellence of its programs, Duke's Center for International Studies has been designated a National Resource Undergraduate Center in International Studies by the U.S. Department of Education.

In addition, the center provides funding for graduate student and faculty travel and research, and for interdisciplinary faculty working groups and committees which

sponsor programs such as visiting speakers, faculty seminars, conferences/symposia, film series, working papers and other activities. Thematic and area studies committees include:

- African Studies
- Comparative Islamic Studies
- Contemporary East Asian Popular Culture
- National Identity, Nationalism, and Ethnicity
- South Asian Studies
- Transitional Issues in the Former Soviet Union

Asian/Pacific Studies Institute. This program, administered by the Asian/Pacific Studies Institute, supports and encourages Asian and Pacific studies with special emphasis on Japan and China. Courses offered cover a range of disciplines including Japanese, Chinese, Korean, anthropology, economics, art, history, political science, music, and religion. The institute provides support for visiting lecturers and conferences and makes available a limited number of fellowships annually. Study abroad opportunities are available in China and Japan. An East Asia concentration is possible for majors in comparative area studies.

Canadian Studies Center. The Canadian Studies Center administers the Canadian Studies Program, which offers courses introducing students to various aspects of Canadian life and culture. Courses and lectures in a wide range of disciplines in the humanities and the social sciences are designed to increase students' knowledge and understanding of Canada. Special emphasis is placed on Canadian problems and comparisons of Canadian and American perspectives. Concentrations in Canadian studies are described in the chapter "Courses of Instruction." Study abroad opportunities are available.

Latin American Studies Program. The Council on Latin American Studies administers a comprehensive program in Latin American studies. A wide range of courses in the humanities, the social sciences, Portuguese, and Spanish is offered. A certificate in Latin American studies may be earned by students who are not comparative area studies majors or minors upon completion of the requirements. Visiting professors and lecturers from Latin America, a speakers series, conferences, and summer programs abroad are supported by the program. Faculty associated with the program work closely with students majoring in comparative area studies who concentrate in Latin America.

In addition, the council and the Institute of Latin American Studies at Chapel Hill sponsor the Duke–University of North Carolina Program in Latin American Studies that includes yearly faculty exchanges of two faculty members from each institution, pre-dissertation awards for travel in Latin America, joint undergraduate and graduate student seminars, graduate student colloquia, and faculty-student research working groups.

Center for Slavic, Eurasian, and East European Studies. With the support of the U.S. Department of Education, this joint Duke–University of North Carolina Center coordinates interdisciplinary efforts primarily in the fields of Russian (including Soviet) and East European history, economics, political science, literature, linguistics and language training. Language instruction in Russian, Polish, and Ukrainian is available. The committee also sponsors visiting lectures, conferences, symposia, and films.

Center for European Studies. Faculty associated with the Duke–University of North Carolina Center for European Studies promote comparative research, graduate training, and teaching activities concerned with historical and contemporary European issues. Funded in part by the U.S. Department of Education, this program regularly sponsors campus-wide events, such as conferences on contemporary trends in European politics and society and recent developments in the European Union. It also supports faculty-student working groups, curriculum development, and library materials acquisition. A West Europe concentration is available for Comparative Area Studies majors.

CENTER FOR RESEARCH ON WOMEN (Duke-UNC Chapel Hill)

The Duke-UNC Center for Research on Women was founded in 1982 as a collaborative endeavor between Duke University and the University of North Carolina (Chapel Hill) to promote women's studies scholarship and research; to support curriculum development in women's studies; and to disseminate women's studies research and information throughout the South. The center principally seeks to explore the dynamics of gender, race, and class, with a particular emphasis on the American South.

Its regular activities include the sponsorship of conferences, colloquia, and community events. Students seeking information should inquire at 338 Carr Building (Duke), (919) 684-6641.

CENTER FOR DOCUMENTARY STUDIES

This interdisciplinary center for research, teaching, and the dissemination of documentary studies is dedicated to encouraging and supporting the work of photographers, filmmakers, historians, journalists, novelists, and others who work by direct observation and participation in the lives of individuals and communities. A center-sponsored history project, "Behind the Veil: Documenting African American Life in the Jim Crow South," offers a limited number of assistantships to graduate students in history.

The center also offers courses under the auspices of several Duke departments including history, public policy studies, education, and English. Such courses, often special topics courses, have included American Communities: A Documentary Approach; Advanced Documentary Photography; The Segregated South; and Into the Fields: Migrant and Seasonal Farmworkers in North Carolina.

For more information consult Iris Tillman Hill, Director, Center for Documentary Studies, Lyndhurst House, 1317 West Pettigrew Street, Box 90802, Durham, North Carolina 27708-0802.

CONTINUING EDUCATION

Academic Study. Local adult residents are encouraged to pursue academic study at Duke (1) as potential degree candidates, for those who have not been full-time college students for at least four years and are now resuming or beginning a bachelor's degree; (2) as nondegree students, for those with baccalaureates who now seek a sequence of undergraduate credit courses; and (3) as students completing the last year of work towards a degree at another institution. These students are given academic counseling by the Office of Continuing Education and Summer Session and are subject to most of the regulations set forth for degree candidates. Continuing education applications may be obtained from the Office of Undergraduate Admissions and must be returned to that office, accompanied by a \$35 application fee, by August 1 for the fall semester and by December 1 for the spring semester.

Career Development Services. Career Development Services assists persons making decisions about returning to work, re-entering school, career planning and assessment, life/work transitions, and individual goal setting. Individual appointments, group sessions, and workshops are held.

Short Courses and Conferences. Short courses (noncredit) in the liberal arts are offered regularly throughout the year for those interested in personal enrichment or career advancement. Conferences, institutes, and training programs are conducted during the academic year and in the summer. Some are residential and others are designed for local participants. Some award continuing education units.

Test Preparation Program. Test preparation classes for the GRE, GMAT, and LSAT exams. These courses focus on the skills critical for a good test performance: test-taking techniques, time management, logical reasoning, and math and verbal skills.

The Institute for Learning in Retirement. The institute is for persons over fifty years of age who recognize in themselves a need to continue learning and sharing knowledge.

Duke Institute for English Language and U.S. Culture. This intensive summer institute is designed to help international students strengthen their English skills.

For brochures on each program and for fuller information, write or call the Office of Continuing Education and Summer Session, Duke University, Box 90700, Durham, NC 27708-0700; 919-684-6259.

INSTITUTE OF THE ARTS

The Institute of the Arts is a center for the interdisciplinary presentation, support, production, and study of the arts. The institute coordinates artist residencies on campus and in the community, presents series in contemporary performance, world music/dance, and modern dance. Working with a representative faculty council, the institute coordinates and supports new curricular initiatives in the arts and develops cooperative programs between Duke and the surrounding community. An undergraduate certificate program in the arts is offered as well as one-semester, off-campus residency programs in New York City (fall) and Los Angeles (spring). The institute is also the administrative home for the Duke Dance Program. It provides support for student and faculty projects in the arts and administers awards and prizes. For further information, inquiries should be made to Duke University Institute of the Arts, 109 Bivins Building, Box 90685, (919) 660-3356.

INSTITUTE OF STATISTICS AND DECISION SCIENCES

The Institute of Statistics and Decision Sciences was founded in 1985 to conduct and coordinate teaching and research in statistics and the application of quantitative methods to the study of decision making. The institute offers a wide range of course work and consultation in mathematical statistics, statistical modeling, applied statistics, statistical computing, decision analysis, and utility theory. Students interested in the activities of the institute should consult the institute office, 214 Old Chemistry Building, (919) 684-4210.

Certificate Programs

Through the programs described below, students have the opportunity to engage in the specialized study of an area without the concentration required of a major. These programs, supplements to the basic course of study, usually reach beyond departmental boundaries and generally provide an interdisciplinary focus to the subject matter. They offer official recognition of participation in the form of a certificate. More information may be obtained from the directors of the programs; detailed descriptions are in the chapter "Courses and Academic Programs."

THE ARTS

The Certificate in the Arts is an interdisciplinary program of six courses: one required core course, Institute of the Arts 151—Art and Its Making, and five other courses selected by the student from among approved offerings in two or more art forms. Approved courses are those above the introductory level offered in art/art history, creative writing, dance, drama, film and video, music, and some courses in literature. An independent study project may be substituted for one of the courses, and the Institute provides funding to assist with the costs of project realization. Intention to pursue the Certificate in the Arts must be declared by the end of the first semester of the junior year. For more information, consult Kathy A. Silbiger, Director, Institute of the Arts, 660-3356.

DANCE

The Dance Program offers students the opportunity to study modern dance, ballet, African dance, jazz, dance history, choreography, and repertory in an environment that challenges the student's intellectual, expressive, and physical capabilities. The dance faculty provides close contact and guidance and is committed to the creative development of the individual student. The certificate requires a year of performance/technique courses, plus five additional courses in history, theory, and composition. For more information, consult Barbara Dickinson, Director of the Dance Program, 919-660-3352.

EARLY CHILDHOOD EDUCATION STUDIES

This program provides opportunities to plan an individualized certificate combining an orientation to the field of early childhood studies (birth to kindergarten), a selection of courses in two areas of knowledge (the development of the child and the conditions of childhood), and a supervised internship in selected early childhood centers. Admission to the program and advising of students are determined by a committee of professors from the departments of psychology, sociology, cultural anthropology, and education. For more information about the program and admission procedures, inquire at the Program in Education (919-660-3075).

FILM AND VIDEO

The Program in Film and Video introduces students to the critical analysis of new communications technologies: film, photography, and television. Practical experience in 16mm film and videotape production is also available through course work and internships. Established in 1986, this program also sponsors speakers, film and video screenings, and exhibits under the rubric of Screen/Society. For further information, students should consult the program director, Professor Jane Gaines, 107A Art Museum, (919) 684-4130.

GENETICS

The University Program in Genetics offers a certificate program to all nonbiology majors with interests in genetics. Students majoring in the humanities, physical and social sciences and engineering are welcome. Genetics is becoming increasingly relevant for careers in medicine, law and public policy. Course requirements of the Genetics Certificate Program include Introductory Biology, Principles of Genetics and Cell Biology, a lab course in Cell and Molecular Biology or Molecular Genetics and a semester of Independent Study. For more information, consult Professor John Boynton, 919-613-8157.

HEALTH POLICY

Through its Center for Health Policy Research and Education, the university offers undergraduates a sequence of health policy courses whose successful completion will lead to a certificate. The certificate sequence in health policy culminates in an integrative group project. For further information, inquire at the Center for Health Policy Research and Education, Suite 125 Old Chemistry Building.

HUMAN DEVELOPMENT

This interdisciplinary program provides opportunities to compare and to explore the complementarity of disciplinary perspectives on the biological, biomedical, psychological, social, and cultural aspects of human development. The program integrates courses, a research apprenticeship, and special events through an active advisory procedure. For more information and a program brochure, consult Professor Robert J. Thompson, Jr., 919-684-5072.

JUDAIC STUDIES

Duke University through the auspices of the Center for Judaic Studies offers a full range of courses in Judaic civilization. Participating departments and programs include religion, Germanic languages, Asian and African languages, comparative literature, history, political science, international studies, anthropology, and women's studies. Also, courses may be taken at nearby Chapel Hill where additional courses are offered in Judaic Studies. A full range of courses is available in classical and modern Hebrew as well as in Yiddish. Students desirous of further language training or specialization may elect to pursue their studies in Israel during their junior year at a Duke approved program.

The program in Judaic studies is largely focused on undergraduates who may earn a certificate in Judaic studies after taking any four nonlanguage courses, or who may pursue Judaic studies under Program II, the alternative program option. This option offers a student the flexibility to design, with the aid of a faculty advisor, a curriculum to accommodate unusual interests and talents. Some students may also choose to concentrate on Judaic studies within the context of a religion major; such students are also eligible to receive a certificate.

Duke regularly sponsors its own summer program in Israel and over 800 students have participated in it to date. For further information, inquire at the Center for Judaic Studies, Box 90964, Duke Station, Duke University, Durham, North Carolina 27708-0964.

LATIN AMERICAN STUDIES

The Program in Latin American Studies, which is administered by the Council on Latin American Studies, provides students with the opportunity for an interdisciplinary and in-depth study of the realities of Latin American societies and cultures. The council offers courses and a certificate on completion of the requirements, and also sponsors visiting professors and lecturers from Latin America, a speakers series, conferences, film festivals and summer and academic year programs abroad. Additional information about the certificate program, which is available to students who are not comparative area studies majors or minors, is given in the chapter "Courses and Academic Programs."

MARKETS AND MANAGEMENT STUDIES

The Program in Markets and Management Studies is designed to meet the needs of undergraduates who wish to combine their current course of study with preparation for careers in business, management, marketing, advertising, or related graduate study. Students choose from a wide range of courses in a number of departments in seeking to understand how business enterprises operate and how markets for goods, services, and labor are changing in an increasingly competitive global economy. Core courses, offered by the Department of Sociology, place a heavy emphasis on case studies of actual management and marketing problems and are intended to teach a broad range of analytical and practical skills. For further information, consult Professor Kenneth Spenser, Program Director, or Barbara Pollock, Program Coordinator, Department of Sociology.

NEUROSCIENCES

The Undergraduate Neurosciences Program reflects the rapid development in our understanding of brain mechanisms and behavior. The approach to the neurosciences is broad, covering the cellular and subcellular levels (molecular and genetic properties, cell and membrane physiology, neurochemistry), systemic levels (neuroanatomy, sensory and reflex function, brain disorders), and integrative levels (perception, memory, behavioral genetics, evolution of brain and behavior). The program emphasizes breadth in the arts, sciences and humanities, with an understanding of the neurosciences as an integral part of a liberal education. Information may be requested from the co-directors, Professors Warren Meck (psychology) and Stephen Nowicki (zoology).

PERSPECTIVES ON MARXISM AND SOCIETY

The Program in Perspectives on Marxism and Society focuses on Marxism, not primarily as a political or ideological system, but as a scholarly methodology incorporating a variety of analytical techniques across a wide range of disciplines. The unifying theme of the program is a critical appraisal of Marxist methods of analysis and their social implications, considered in the light of theoretical alternatives and changing historical circumstances. For further information consult the director, Professor Frederic R. Jameson, Literature Program.

PRIMATOLOGY

The Primatology Program provides an interdisciplinary investigation of primate development and evolution from the anatomical, ecological, and behavioral perspectives. Theoretical issues arising from sociology and new fossil discoveries will be tested as to their validity when applied to human evolution. The course of study leads from a generalized introduction through more specialized topics to the design and completion of a research project at the Duke University Primate Center or in a faculty laboratory under the guidance of a faculty member. For more information, call 660-7387.

SCIENCE, TECHNOLOGY, AND HUMAN VALUES

The Program in Science, Technology, and Human Values provides students an opportunity to explore the social and cultural dimensions of science, technology, and medicine. The program brings together students and faculty from the sciences and engineering with their counterparts in the humanities and social sciences, with a heavy emphasis on interdisciplinary study and discussion.

STUDY OF SEXUALITIES

The recently established interdisciplinary Program in the Study of Sexualities offers a certificate in an area of study that provides a powerful methodological tool for the analysis of society. Sexuality is not limited to just heterosexuality and homosexuality, but encompasses other erotic desires, sexual relationships, and gender roles; noting these expressions and attitudes towards them will illuminate society's personal as well as sociopolitical and economic arenas. For more information, consult Professor John Younger, 919-684-2082, e-mail: jyounger@acpub.duke.edu.

Specialized Programs

THE FOCUS PROGRAMS

FOCUS offers first-year students a number of programs in the fall semester, each featuring a cluster of courses with a common theme. Classes are small, interrelated, and mutually reinforcing, providing opportunities for discussion and multiple perspectives. Since one of the aims of FOCUS is to encourage the integration of academic life with residential life, participants live in the same residence halls together with non-FOCUS students.

Each of the following FOCUS programs requires participants to take 3.5 courses, including two seminars, University Writing Course 7, and a half-credit FOCUS Discussion (FOC). The interdisciplinary course is designed to provide a social setting for the discussion of ideas related to the theme of the program as a whole or of topics of special interest intended to supplement the content of the seminars. It meets once a week over dinner.

Further information and application forms may be obtained from the Pre-Major Advising Center (919-684-6217). Below are the FOCUS programs for 1996.

The Arts in Contemporary Society. The FOCUS program on the Arts in Contemporary Society offers students the opportunity to explore the place of art, music, dance, creative writing, and drama in our society. The seminars offered will give an overview both of various art forms and of the problems facing artists and the arts at the end of the twentieth century. The emphasis this year will be on the performing arts.

Changing Faces of Russia: Redefining Boundaries. On December 25, 1991, the Soviet Union ceased to exist. The program, Changing Faces of Russia: Redefining Boundaries (CFR), will focus on the fundamental and rapid changes that have occurred in Russia and the former Soviet Union in the course of the twentieth century. Students will be introduced to central topics in a range of disciplines, including history, culture, language, linguistics, and legal traditions, that are essential in achieving an understanding of the complex workings of a region that has had and will continue to have a significant impact on the political and economic life of both East and West.

This body of coursework will allow the student to begin to develop a more profound perspective on the current upheavals and transformations occurring in the Russian federation.

Evolution and Humankind. Students of Evolution and Humankind will study the evolution of human beings and the diversity and similarity of human experience. Evolutionary thinking has radically changed our perceptions of ourselves and the world around us. The Evolution and Humankind program investigates the ethical and social dimensions of scientific inquiry with topics ranging from human nature to the social implications of modern genetics and biotechnology and from the religion/evolution controversy to modern epidemics.

Exploring the Mind. The program Exploring the Mind is designed to introduce students to the study of the mind: what it is, what it produces, and how it works. It will address such questions as the relation between mind and brain, the connection between language, thought, and social interaction, how culture and the brain have co-evolved, and how brain mechanisms contribute to our understanding of human experience. The program will consider how the mind/brain works to produce thought, emotion, consciousness, culture, and language.

Globalization and Cultural Changes. The Globalization and Cultural Changes program offers students the opportunity to explore social, economic, political, and ethical issues related to African, Asian, and Latin American cultures. It will examine the relationship of the Third World to the West, globalization, economic and cultural interdependency, as well as power and identity in the new global order.

Health Care and Society. The Health Care and Society (HCS) program will introduce first-term students to the interaction of scientific, cultural, ethical, policy, and historical issues of medical practice at the end of the twentieth century in America. The courses will be informed by the economic and legal issues thrust upon the practice of medicine in the "managed care" era.

Medieval Communities: Power and Imagination. The Medieval Communities: Power and Imagination program will explore how communities are made and the means by which they are brought together symbolically, and it will do so in the context of the profound economic and social changes that transformed Western Europe over the twelfth, thirteenth, and fourteenth centuries. The program will examine the processes of "imagining community" from the perspectives of literature, the visual arts, and history.

Popular Culture, Media, and Identity. The Popular Culture, Media, and Identity program is concerned with the way in which popular culture transmits values and ideas

to the world's citizenry and the role of the mass media in this process of transmission. Professors of cultural anthropology, literature, drama, and other disciplines collaborate in this program to create a challenging forum for exploring the tensions between personal and local visions and the force of the media in shaping the meaning of culture, communication, and representation in social life.

Structure in Nature and Human Designs. The Structure in Nature and Human Designs program investigates a wide variety of natural and social phenomena in terms of their distinct "structures." By recognizing and describing the organizational systems of molecules, bodies, vehicles, cities, and ideologies, it is possible to understand them more fully. Since the structures to be traced are not simply objective or natural but often the result of our own cultural conditioning, this study leads to greater self-knowledge as well as a fuller understanding of the world around us.

Twentieth-Century America. The Twentieth-Century America Program considers the challenges facing America in the last decade of the twentieth century from the perspectives of history, literature, religion, political science, art, and sociology. Social change, democracy and political ideals, and ethics are examined within the context of history and contemporary society.

Twentieth-Century Europe. The Twentieth-Century Europe program is designed to introduce students to major themes of European history and culture in the twentieth century. Nationalism, modernism, socialism, and total war will be an important focus of the program. Participants will also examine the forces at work that led to the establishment of the present-day European Community. Since language is a fundamental form of cultural expression, students are expected to enroll either in the program seminar offered in French or in another course in a European language.

RESERVE OFFICER TRAINING CORPS

Duke University and the military services cooperate in offering officer education programs to provide opportunities for students to earn a commission in the United States Air Force, Army, Navy, or Marine Corps. The programs are described below, and detailed information on scholarships, entrance requirements, and commissioning requirements is available from the offices of the Department of Air Force Aerospace Studies, the Department of Military Science (Army), and the Department of Naval Science. Courses offered in these departments are described in the chapter "Courses of Instruction" in this bulletin.

The Air Force Reserve Officer Training Corps (AFROTC). AFROTC selects, trains, and commissions college men and women as officers in the U.S. Air Force. AFROTC offers a four-year and a two-year curriculum leading to a commission as a second lieutenant. The four-year program consists of both the General Military Course (GMC), a course sequence taken during the freshman and sophomore years, and the Professional Officer Course (POC) taken during the junior and senior years. Entry into the POC is competitive and requires successful completion of a field-training encampment during the summer between the sophomore and junior years.

The GMC is open to freshmen and sophomores. Students who complete both the freshman and sophomore years of the program and successfully compete for entry into the POC will attend a four-week training encampment. All other successful POC applicants will attend a six-week encampment. Students interested in the two-year POC program should submit applications no later than early spring semester of their sophomore year. Between the junior and senior years, POC cadets are given the opportunity to volunteer for advanced training in a variety of different areas.

Cadets may compete for two- and three-year scholarships. These scholarships pay up to full tuition, books, and a monthly tax-free stipend of \$150. All members of the POC receive the nontaxable stipend. Upon graduation all cadets are assigned to active duty

with the U.S. Air Force for a period of at least four years. Direct inquiries to the Department of Aerospace Studies, 303 North Building, (919) 660-1860.

The Army Reserve Officers' Training Corps (AROTC). Army ROTC provides students with an opportunity to earn a commission as a second lieutenant in the U.S. Army, U.S. Army Reserve, or Army National Guard while completing requirements for a baccalaureate degree. Two programs are available, the Basic Course and Advanced Course.

A three- or four-year program consists of the Basic Course (freshman and sophomore years) and the Advanced Course (junior and senior years). Direct entry into the Advanced Course (a two-year program) is possible under specific circumstances. Students wishing to join the two-year program must confer with the Department of Military Science not later than April 1 of their sophomore year. There is only one mandatory summer training requirement, Advanced Camp, which takes place over a five-week period between the junior and senior years. All uniforms and some texts are provided.

Upon commissioning, the service obligation may be fulfilled on active duty, in the Army Reserve, or in the Army National Guard, as directed by the Secretary of the Army. At the beginning of the senior year, cadets submit a preference statement concerning the method by which they wish to fulfill their service obligation and the specialty in which they desire to serve. A request to delay the fulfillment of the service obligation in order to attend graduate or professional schooling is also authorized.

Cadets are encouraged to compete for Army ROTC scholarships which pay up to \$20,000 towards tuition and fees, a generous textbook and equipment allowance, and \$150 per month for each month in school (up to \$1,500 per year). Nonscholarship Advanced Course cadets also receive the \$150 monthly stipend. All of the above benefits are tax-free. Participants in Advanced Camp are paid one-half of the basic pay of a second lieutenant.

Detailed information is available from the Department of Military Science, 06 West Duke Building, East Campus, Box 90752, (919) 660-3089 or 660-3090, or 1-800-222-9184.

The Naval Reserve Officer Training Corps (NROTC). The Department of Naval Science offers students the opportunity to become Naval and Marine Corps officers upon graduation. Selected students may receive up to four years of tuition, fees, uniforms, and textbooks at government expense under the auspices of the Scholarship Program. In addition, scholarship students receive subsistence pay and summer active duty pay of approximately \$1,500 a year. Each summer they participate in four weeks of training either aboard ship or at naval shore facilities to augment their academic studies. Four years of active duty service as a regular officer is required upon graduation.

Nonscholarship students may be enrolled in the College Program. They take the same courses and wear the same uniform, but attend the university at their own expense. Uniforms and naval science textbooks are provided by the government.

College Program students may compete for scholarship status through academic performance, demonstrated aptitude for military service, and nomination by the professor of Naval Science. Students in either program may qualify for a commission in the Marine Corps through the Marine Corps Option Program. Students seeking further information on the NROTC program may call the Department of Naval Science, 225 North Building, (919) 660-3700.

Off Campus Programs and Opportunities

AGREEMENTS WITH OTHER UNIVERSITIES

Neighboring Universities. Under a plan of cooperation, the interinstitutional agreement among Duke University and the University of North Carolina at Chapel Hill, North Carolina State University at Raleigh, and North Carolina Central University in Durham, a student regularly enrolled in Duke University and paying full fees may enroll for one approved course each semester at one of the institutions in the cooperative

program unless an equivalent course is offered at Duke in the same calendar year. Under the same conditions, one interinstitutional course per summer may be taken at a neighboring institution participating in this agreement provided that the student is concurrently enrolled at Duke for one full course credit. This agreement does not apply to contract programs such as the American Dance Festival.

Approval forms for courses to be taken at these neighboring institutions may be obtained from the offices of the academic deans at Duke. Only those courses not offered at Duke will be approved. Credit so earned is not defined as transfer credit since grades in courses taken under the interinstitutional agreement are entered on the official record and used in determining the quality point ratio. The student pays any special fees required of students at the host institution and provides transportation.

Howard University. Duke students participating in the Duke/Howard University Exchange Program may spend a semester studying at Howard University in Washington, DC, while Howard undergraduates enroll for the same period at Duke. More information about this program, administered by Trinity College, is available in 03 Allen Building.

DUKE IN NEW YORK ARTS PROGRAM

The Institute-of-the-Arts-sponsored Duke in New York Arts Program is a fall-semester off-campus study program for juniors and seniors wishing to engage in an intensive study of the arts that includes an internship. The program has four components, each earning one Duke credit: two seminars taught by the faculty director from Duke (Institute of the Arts 101S and 103S); an arts internship (Institute of the Arts 102); and an elective course at New York University. The internships may be in the fields of visual or performing arts, museum and gallery management, literary arts, film and television, and related fields. A substantive paper is required. For more information, consult Kathy A. Silbiger, Administrative Director, 660-3356.

LEADERSHIP AND THE ARTS (pending approval for 1997-98)

This program is a unique chance for fifteen Duke students to spend the spring semester in New York City studying leadership, policy, philanthropy, and creativity, and learning from people who make art and from others who organize and support it. The program includes four full credit Duke courses. Two public policy courses are required: "Leadership and Quality in the Arts" and "Policy, Philanthropy, and the Arts." A third required course, "Opera at the Metropolitan," is a music course. For their fourth course students may choose from a variety of tutorial and independent study options in history, religion, art, literature, public policy, and other fields.

Students can expect to see as many as fifteen operas at the Met and more than that number of plays and musicals, in addition to concerts and dance performances. Course assignments also include visits to museums and galleries, and talks with working artists. Choreographers, actors, directors and producers, and supporters of the arts in business, government, and the foundations join the weekly seminars for discussions. Students interested in applying should consult the Hart Leadership Program in the Terry Sanford Institute of Public Policy.

DUKE IN LOS ANGELES PROGRAM IN MEDIA ARTS

This interdisciplinary program is sponsored jointly by the Program in Film and Video and the Institute of the Arts. It offers students interested in the film, television, music recording, contemporary art, and entertainment law industries an intensive spring-semester program in Los Angeles, based at the University of Southern California. The program consists of a required seminar taught by the Duke faculty director (Literature 160S—The United States Culture Industries); an internship for credit; and two courses at USC in either the School of Cinema-TV or the Division of General Studies. A

substantive internship paper is required. For more information, consult Professor Catherine Benamou, faculty director, 681-7446, or Kathy Silbiger, Administrative Director, 660-3356.

DUKE UNIVERSITY MARINE LABORATORY (Nicholas School of the Environment)

The Duke University Marine Laboratory (DURL) is located within the Outer Banks, adjacent to the historic seacoast town of Beaufort, North Carolina, with direct access to the Atlantic Ocean, Cape Lookout National Seashore Park, sand beaches and dunes, estuaries, wetlands, and maritime forests. The dynamic collisions of oceanic currents offshore of the Outer Banks provide excellent opportunities for marine study. A component of the Nicholas School of the Environment, the Duke University Marine Laboratory is an interschool teaching and research facility dedicated to the study of coastal basic processes and human interactions with those processes. The Beaufort campus of Duke has available dormitory and dining facilities, classroom laboratories, research buildings, a specialized marine science library, as well as a variety of boats which are utilized in both teaching and research. A year-round seminar series which includes both guest lecturers and the resident academic and research staff serves to enrich the student community.

At the undergraduate level, the Marine Laboratory serves students in the natural and environmental sciences as well as those in the social sciences, humanities, or engineering who have adequate preparation. Academic programs include a fall semester and spring semester for undergraduate juniors and seniors, summer courses designed for both undergraduate and graduate students, and a cooperative program for the spring term with the Bermuda Biological Station for Research. The academic programs integrate classroom lectures and laboratories with direct field and shipboard experiences. For additional information and application materials, write to the Admissions Office, Duke University, Nicholas School of the Environment, Marine Laboratory, 135 Duke Marine Lab Road, Beaufort, North Carolina 28516-9721 (919-504-7502 or email hnearing@mail.duke.edu).

WASHINGTON SEMESTER PROGRAM (American University)

The Washington Semester Program offers students a chance to take advantage of the resources of Washington, DC. During the program, students are immersed in Washington culture as they work in the nation's capital with the policymakers and business professionals. Washington Semester students earn a full semester of credit by studying in one of these areas: American politics (national government or public law), foreign policy, peace and conflict resolution, economic policy, justice, journalism, museum studies and the arts, international business and trade, and international environment and development. Further information is available in the Department of Political Science, 325 Perkins Library.

STUDY ABROAD (Office of Foreign Academic Programs)

A Duke student may earn credit for approved work completed during the academic year at a foreign university or for an approved program abroad sponsored by Duke or by another approved American college or university in the fall, spring, and summer. To receive the maximum amount of study abroad transfer credit at Duke—generally four course credits for a full semester, eight for a full academic year, two for a summer—a student is expected to take a full, normal course load, as defined by the other institution involved. The responsible Duke departments, however, make the final decision on the final number of credits transferable. Students attending British universities for the full academic year can transfer a maximum of eight courses. However, at British universities which are on the trimester system, only three course credits may be transferred for the single fall semester. Students attending such universities in the spring are generally

required to attend the two remaining trimesters and may transfer a maximum of five credits. No additional study abroad transfer credit will be awarded for a course overload. A leave of absence from the university is granted for a semester or academic year of approved study abroad. Duke-administered programs do not involve transfer credit and do not require a leave of absence. Arrangements are made normally for students to register, while abroad, for the term in which they plan to return. Seniors planning to spend their last semester abroad are subject to the residence requirement and may face postponed graduation because transcripts from abroad are often delayed. Students studying abroad on programs not administered by Duke will be charged a study abroad fee. See the chapter titled "Financial Information" for information concerning fees for studying abroad on non-Duke programs.

Semester and Academic Year Programs

A student who wishes to receive transfer credit for study abroad should take into account the following criteria established by the faculty and administered by the Committee on Study Abroad:

1. a scholastic average of at least a B- (a student lacking this average may petition the academic dean responsible for study abroad if there are unusual circumstances);
2. certification, when applicable, from the foreign language department concerned, that the student has an adequate knowledge of the language of the country in which study is pursued;
3. approval, obtained before leaving Duke, of the appropriate directors of undergraduate studies for the courses to be taken abroad, as well as approval of the program and the courses by the dean responsible for study abroad and by the student's academic dean;
4. permission for leave of absence once program plans are complete.

Transfer credit will be awarded for work satisfactorily completed abroad when the conditions outlined are met. In addition, the actual grade received abroad will appear on the Duke transcript alongside the indicator that transfer credit was granted. The foreign grades will not be translated, nor will they be computed into the students' grade point average.

Duke, at present, offers various programs in cooperation with other universities during the fall and spring terms. Students accepted may study in:

Australia. Duke has agreements with a number of top Australian universities, allowing students to become members of outstanding teaching and research institutions in Australia for a semester or an academic year. The universities currently available are the University of Sydney, the University of Melbourne, the University of New South Wales, the University of Western Australia, the University of Queensland, James Cook University, the University of Tasmania, and the University of Wollongong. Applications are available in 121 Allen Building.

Austria. From time to time Duke sponsors a term program in Vienna for members of the Wind Symphony.

Bolivia, La Paz. This is a fall or spring semester interdisciplinary program in Latin American and Andean studies based at the Universidad Mayor de San Andres and the Universidad Catolica Boliviana. Students take two core courses designed especially for the program, and select their remaining courses from regular Latin American studies offered at the two host universities. Students live with families. Information and applications are available from 121 Allen Building.

Britain. Duke has agreements with a number of top British universities, allowing our students to become members of outstanding teaching and research institutions in Britain for a semester or academic year. The universities currently available are the

University of London (King's College, Imperial College of Science, Technology and Medicine, the London School of Economics and Political Science, Queen Mary and Westfield College, and University College); the University of Birmingham; the University of Bristol; the University of Durham; the University of Edinburgh; the University of Glasgow; the University of Manchester; St. Andrew's University; the University of Sussex; and the University of Warwick. There is a special program for engineers at University College London. Applications are available in 121 Allen Building.

Canada, Montreal. Duke students participating in the Duke/McGill University Exchange Program may spend one semester or academic year at McGill, located in the Quebec city of Montreal. Because the language of instruction at McGill is English, program applicants need not have studied French although some knowledge of it would be advantageous. The program is sponsored by the Canadian Studies Center and Trinity College; information and application forms are available in 121 Allen Building.

China. In cooperation with Nanjing University and Beijing Teachers College, Duke conducts a six-month study program in the People's Republic of China in the summer and fall terms. The program includes a fall term at Nanjing University preceded by an intensive language session in Beijing. Participants must have at least one year of Chinese language. Information is available from the Asian-Pacific Studies Institute, 2111 Campus Drive, and in 121 Allen Building.

Egypt, Cairo. Through an agreement with the American University in Cairo, Duke students may spend a spring semester or academic year there taking regular classes with Egyptian students. They may enroll in general courses in humanities, social sciences, and sciences, as well as in Arabic language and specialized courses in Middle Eastern studies. Applications are available in 121 Allen Building.

England, Bristol. This spring semester program which offers an intensive study of dramatic literature and drama in performance is based at the Department of Drama, Film and Television at the University of Bristol. Students take a full load of courses at Bristol, and a special course designed for the program which includes extensive theater experience in London and Stratford-upon-Avon. Information and applications are available from 121 Allen Building.

England, Oxford. Through a special arrangement with two colleges at the University of Oxford, selected Duke students may spend their junior year at Oxford as regularly enrolled visiting students. The students are treated exactly like their British counterparts, and most of them live in college housing. Students may choose to concentrate their study in any one of the major fields in the humanities, social sciences, or selected natural sciences. Each student is assigned a tutor. Applicants must have a very strong academic record; previous course work in the subject to be pursued at Oxford is also required. Admission to this program is at the discretion of the University of Oxford. More information may be obtained in 121 Allen Building.

France, Paris. Duke offers a full-year program in Paris in conjunction with the University of Paris I, IV, and VII. The language of instruction will be French; one course will be offered by the resident director, and three courses will be taught by the Parisian faculty. Applicants must have completed four semesters of French plus two courses at the 100-level or above with a grade of at least B+. Priority will be given to juniors and full-year applicants, although some participants may be admitted for one semester only. More information may be obtained in 121 Allen Building or the Department of Romance Studies, 205 Languages Building.

Germany, Berlin. Duke students study at the Humboldt University of former East Berlin (fall) and at the Free University of former West Berlin (spring). In the fall semester they take specially arranged courses in German language and literature and the social sciences for Duke credit. In the longer spring semester, up to 5 courses may be taken and up to two courses can be chosen from the regular course offerings of the Free University. One year (fall or year program) or two years (spring program) of college-level

German or its equivalent are required. More complete information may be obtained in 121 Allen Building.

Italy, Rome. As the managing institution of the Intercollegiate Center for Classical Studies in Rome, Duke University may send classics majors and other students with strong classical interests for admission to a term's work at the center, usually in the junior year. Instruction is offered in Greek, Latin, ancient history, ancient art, and archaeology. Some scholarship help is available. Additional information may be obtained from the Department of Classical Studies, 236 Allen Building or 121 Allen Building.

Japan, Tokyo. Qualified students may be recommended each year by the Asian-Pacific Studies Committee for the junior year exchange program with International Christian University in Tokyo. This small, select university is noted for the international character of its student body (85-90 percent Japanese, 10-15 percent non-Japanese, primarily from other Asian nations and the United States). Courses may be taken in English as well as Japanese. More information is available from the Asian-Pacific Studies Institute, 2111 Campus Drive, or 121 Allen Building.

Russia, St. Petersburg. This fall or spring semester program is offered for undergraduate and graduate students who have studied Russian for two years at the college level. Students are enrolled in the State University in St. Petersburg and will have the opportunity to improve their language skills in a living-learning environment. All courses are taught in Russian. Students are housed with families. Information and applications are available from 121 Allen Building.

Scotland, Glasgow. The Department of Public Policy Studies offers departmental majors the opportunity to study during the fall semester of their senior year at the University of Glasgow where, practically speaking, public policy analysis was invented. Students will live on campus and will take the program's special seminar in public policy in addition to three electives from the general university curriculum. Further information may be obtained from the director of undergraduate studies in the Department of Public Policy Studies, Sanford Institute of Public Policy.

South African Republic. Beginning Fall 1997, Duke students may enroll in three of the leading universities of South Africa with which Duke has agreements. Students may matriculate at the University of Cape Town, Rhodes University in Grahamstown, or at the University of Natal in its Durban or Pietermaritzburg Centres, and will become visiting students at these institutions for either a semester or an academic year.

Spain, Madrid. This program offers advanced students a variety of on-site experiences and an opportunity to hear and speak Spanish in an ideal environment. The program offers courses in Spanish history, culture, literature, politics, and arts, as well as several organized excursions. Students are housed with selected Spanish families. More information may be obtained in the Department of Romance Studies, 205 Languages Building, or in 121 Allen Building.

A number of additional approved programs sponsored by other institutions are also available to Duke students for study abroad. Further information concerning semester and academic year programs, as well as summer programs, may be obtained in 121 Allen Building. All Trinity College students are responsible for following the procedures and meeting the deadlines set forth in materials available in 121 Allen Building. In all cases, the dean of study abroad must be informed in advance about a student's plans.

Duke Summer Programs Abroad

The Office of Foreign Academic Programs, in cooperation with several university departments, provides many opportunities for students to study abroad during the summer while earning Duke University credit. Information about Duke Summer Programs Abroad and about the time they will next be offered can be obtained from the program directors or the Office of Foreign Academic Programs, 121 Allen Building.

Australia, Sydney. This two-course, six-week program will focus on Australian environmental studies and will be based in Sydney at the University of New South

Wales. One course, to be taught by a professor at the University of New South Wales, will deal with Australian studies. The second course will focus on environmental/ecological issues and will be taught by Professor Mark Bush of Duke University, who will also direct the program. Students will be housed in accommodations at the University of New South Wales. For further information consult the Office of Foreign Academic Programs, 121 Allen Building.

Belgium/Netherlands. This two-course, six-week program will focus on a contextual study of Late Medieval, Renaissance, and Baroque art and culture in Belgium and the Netherlands. The courses are: Art 158-159 or Art 241-242: Art and Cultural History of Flanders and the Netherlands from the Fifteenth through the Seventeenth Centuries (AL) (cross-listed with Comparative Area Studies) taught in English by Professor Hans van Miegroet of Duke, Dutch and Flemish guest lecturers, and art specialists. The program is based for the first two weeks in Amsterdam (Netherlands) and for the remaining four weeks in Gent (Belgium). Participants visit numerous Dutch and Belgian cities and museums. Accommodations are in hotels. For further information consult Professor Hans van Miegroet, Department of Art and Art History, 112 East Duke Building or the Office of Foreign Academic Programs, 121 Allen Building.

Canada. This two-course, six-week program provides a complete immersion in French. This is a Duke-approved rather than a Duke-administered program; students receive transfer credit for work successfully completed. Students are placed in one of nine levels of language instruction during the program. Upon return they are tested and then placed in the appropriate Duke level if they intend to continue with French language studies at Duke. Instruction and accommodations are by the University of Québec, Trois Rivières campus. For further information consult Janice Englehardt, Canadian Studies Program, 2016 Campus Drive or the Office of Foreign Academic Programs, 121 Allen Building.

France, Paris. This two-course, six-week program provides the opportunity to take Duke courses in the ambience of Paris. French 137: Aspects of Contemporary French Culture (CZ, FL) (cross-listed with Comparative Area Studies), is a conversation course taught by a native French speaker; the second course is offered by the Duke director. Four semesters of college French or equivalent are required. Students live in dormitory-style accommodations. For further information consult the Office of Foreign Academic Programs, 121 Allen Building.

Germany, Erlangen. (German Language and Culture Program.) Duke offers two programs at the Friedrich-Alexander Universität at Nürnberg. One program (mid-May to the end of June) provides an opportunity to study classroom German at different levels while living with a German family and participating in study, day trips, and excursions. The courses are German 150: Advanced Grammar Review, Composition, and Current Issues (FL); German 153: Aspects of Contemporary German Culture (CZ, FL) (cross-listed with Comparative Area Studies). Two semesters of college German or the equivalent are required. In the other program (early May to the end of July), advanced students may choose from a variety of FAU courses all taught in German and remain for a full summer semester (through early August). Semester program students live in dormitories. For further information consult Professor Helga Bessent, Department of Germanic Languages and Literature, 116 Old Chemistry Building or the Office of Foreign Academic Programs, 121 Allen Building.

Greece. A four-week, one-course program in Greece focusing on the cultures of ancient Greece. The course, Classical Studies 157/Art 115: Ancient Greece (CZ), is taught by Professor John Younger of Duke University who will also be the program director. The course concentrates on Athens and southern Greece and consists of on-site lectures at numerous sites of historical and archaeological interest throughout the area. Travel will be provided in Greece by private coach. Accommodations will be in hotels. For further information consult Professor Younger, Department of Classical Studies, 228 Allen Building or the Office of Foreign Academic Programs, 121 Allen Building.

India, Bombay. This one course, four-week program focuses on the emergence of modern Indian society and media. The course, Asian and African Languages and Literature 138: The Media in Modern India (CZ), is taught by Professor Satti Khanna of Duke. (The course is cross-listed with Comparative Area Studies.) The program will be based in Bombay. Accommodations are in a hotel. For further information consult Professor Satti Khanna, Asian and African Languages and Literature, 2101 Campus Drive or the Office of Foreign Academic Programs, 121 Allen Building.

Israel, Galilee. This two course, six-week program gives students an opportunity to participate in an archaeological dig. The program is designed to introduce students to the discipline of field archaeology and to the religious, social, and cultural history of ancient Palestine from the Greek period to the Islamic period. The field excavations are located in Galilee at ancient Sepphoris, the administrative capital of that region in the first century C.E. Students register for Religion 99/Cultural Anthropology 99/Classical Studies 99: Perspectives in Archaeology (CZ), taught by Duke staff and Religion 110: Archaeology and Art of the Biblical World taught by Professor Eric Meyers of Duke. All courses are taught in English. For further information consult Professor Eric Meyers, Department of Religion, 118 Gray Building or the Office of Foreign Academic Programs, 121 Allen Building.

Italy, Florence. This two-course, six-week program will focus on Renaissance Florentine history, art, or literature. Courses will be taught in English under the direction of a Duke University professor. Students live in a hotel. For further information consult the Office of Foreign Academic Programs, 121 Allen Building.

Italy, Rome. This one-course, three and one-half week program in Rome explores the history and culture of Rome and includes visits to historical sites and museums, walking lectures, and readings. The course Classical Studies 145/Art 126: Rome: History of the City examines the history of the city from the earliest times through the Baroque and modern periods. The course is taught in English. Students will have accommodations in the Intercollegiate Center for Classical Studies. For further information consult the Office of Foreign Academic Programs, 121 Allen Building.

Japan. This two-course, six-week program at Hosei University near Tokyo focuses on Japanese culture and Japanese business management. One course is taught by Duke faculty, the other by faculty of Hosei University. Both courses are taught in English. Students live variously in a hotel, dormitories, and with families. For further information inquire at the Office of Foreign Academic Programs, 121 Allen Building.

Korea and Taiwan. This six-week, two-course program will spend three weeks in Seoul, South Korea and three weeks in Taipei, Taiwan, studying the political, economic and social developments in these two young democracies. Students will take two courses, taught jointly by Professor Emerson Niou of Duke University and professors from the host institutions. Accommodations are in university guest houses. For further information consult Professor Emerson Niou, Department of Political Science, 406 Perkins, or the Office of Foreign Academic Programs, 121 Allen Building.

Morocco. This two-course, six-week program offers the opportunity to study North African religion and Moroccan culture in Marrakesh and Fez and at Mohammed V University, Rabat. Courses are taught in English. Field trips are part of the courses. Accommodations are in hotels. For further information consult Professor Vincent Cornell, Department of Religion, 115 Gray Building or the Office of Foreign Academic Programs, 121 Allen Building.

Russian Republic. This program offers two Russian language and culture courses in St. Petersburg. Russian language study at different levels will be offered. Classes in St. Petersburg will be taught at the University of St. Petersburg by faculty members of the university. Prerequisite: a minimum of two semesters of college-level Russian is suggested. Students will be housed in an apartment-hotel. For further information consult Professor Edna Andrews, Department of Slavic Languages, 314 Languages Building or the Office of Foreign Academic Programs, 121 Allen Building.

Spain. This two-course, six-week program in Malaga and Madrid offers advanced Spanish students further language training as well as the opportunity to study Spanish culture, history, and politics. Participants can choose two of the following courses: Spanish 131: Spain, Yesterday and Today (CZ, FL); Spanish 137: Art and Civilization (CZ, FL); Spanish 141S: Literature and the Performing Arts (AL, FL); and Political Science 100M.01: Government and Politics of Spain (SS). There will also be excursions to Barcelona, Salamanca, Toledo, Segovia, Granada, Sevilla, and Cordoba. All courses are conducted in Spanish, and students live with Spanish families. For further information consult Professor Miguel Garci-Gómez, Department of Romance Studies, 205 Languages Building or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, Cambridge. This two-course, six-week program directed by Professor Wesley Kort of Duke University focuses on the interrelations among, fiction, religion, and the changing cultural climate in England from the Victorian period to the present day. The courses are taught by Professor Kort along with guest lecturers. Accommodations will be at a Cambridge college. There will be frequent weekend excursions. For further information see Professor Wesley Kort, 328 Gray Building, or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, London-Drama. This two-course, six-week program offers the opportunity to study drama using the resources of London's theaters in conjunction with study of dramatic texts. The courses are Drama 117S/English 176B,S: Theater in London: Text (AL) and Drama 138S/English 176C,S: Theater in London: Performance (AL). Both courses are taught jointly by Professor John Clum of Duke and a distinguished group of British theater practitioners from London and Bristol. The group will attend many theater productions in London and at Stratford-upon-Avon. Accommodations are in a dormitory of the University College, London. For further information consult Professor John Clum, 212 Bivins or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, London. This six-week program will explore and analyze British government and politics, the British media, and the relationship between the two. Students will take a double-credit course, Political Science 100E—Politics and the Media in Britain (SS, C-L: Comparative Area Studies), taught jointly by Professor David Paletz of Duke University and British faculty members. Optional internships are available. Accommodations are in a dormitory of University College, London. For further information consult Professor David Paletz, Department of Political Science, 214 Perkins, or the Office of Foreign Academic Programs, 121 Allen Building.

United Kingdom, Oxford. This six-week session at New College, Oxford, utilizes the Oxford tutorial system of education supplemented by lectures given at the University of Oxford's International Graduate Summer School by noted British scholars. Areas of study include Renaissance British Literature, Nineteenth-Century British Literature, Modern British History, Politics and Government in Britain since 1945, and Law: Personal Injuries in the United Kingdom and the United States. For further information consult Professor Melissa Malouf, 012 Social Sciences or the Office of Foreign Academic Programs, 121 Allen Building.

Special Summer Programs

DUKE SUMMER FESTIVAL OF CREATIVE ARTS

The Duke Summer Festival of Creative Arts is administered jointly by the Summer Session Office and the Office of University Life. The festival provides an exciting, artistically stimulating environment for the campus and community. The Ciompi Quartet, Duke's well-known chamber music ensemble, will perform. Other special events such as jazz concerts, carillon recitals, dance performances, and film series are planned.

The American Dance Festival. The six-week program offers a wide variety of classes, performances, and workshops. For a catalog, write to the American Dance

Festival, Duke University, Box 90772, Durham, North Carolina 27708-0072, or telephone (919) 684-6402.

PRECOLLEGE PROGRAM

During the summer of 1997, Duke University will offer a Term II program for academically talented rising high school seniors from across the country. The PreCollege Program is designed to provide the academic challenge of college-level courses to qualified college-bound students and to help prepare them for the adjustments they will be making when they enter college. Students will enroll in two regular summer session classes with Duke undergraduates. Introductory level courses in the humanities, social sciences, and natural sciences will be offered for college credit. The students will live in supervised, air-conditioned university dormitories, eat their meals in the university dining halls, enjoy the opportunity of studying with distinguished members of the Duke faculty, and will have access to all university libraries and athletic facilities. In addition to the classroom experience, PreCollege students participate in a range of programs and activities designed to aid them in college selection, career exploration, and intellectual and social development. For further information consult the PreCollege Program, Duke University, Box 90747, Durham, North Carolina 27708-0747, (919) 684-3847.

Campus Life and Activities



Student Affairs

The mission of Student Affairs is to create opportunities and challenges for students to broaden their intellectual, spiritual, and emotional horizons—and, in so doing, to engage them with the widest range of persons both within the university and beyond in striving towards a community that fosters social responsibility and reflects the highest aspirations of all its members.

The Division of Student Affairs complements the educational mission of the university by helping to relate many of the nonacademic components of the university to the academic experiences of the students. The residence halls, the athletic fields, the Chapel, and many student organizations play an important humanistic and holistic role in the students' university experience by developing leadership qualities, skills in interpersonal relationships, and appreciation for the care of the physical self. Thus, the university experience encompasses collectively the life of the mind, body, emotions, and, indeed, the spirit.

Residential Life

Duke enjoys a long tradition as a residential university and supplements the formal academic education of students by providing a comprehensive residence life program. A primary goal is to facilitate the creation of residential communities in which there are common interests, free-flowing exchange of ideas, relaxed social activities, and active recreational opportunities. Students, faculty, and staff work cooperatively to provide programs and activities in keeping with these guiding principles. Leadership opportunities, faculty dinners/discussions, and intramural sports are but a few of the offerings in which students may choose to become involved.

First-year students, with the exception of those who petition to live at home, are required to live in university residence halls. After the first year, students may elect to reside in selective and independent residence halls or the Central Campus apartments. Nearly 90 percent of the undergraduate student body chooses to live on campus each year, a clear indication of student appreciation for and satisfaction with the residential experience. Students enrolled beyond their fourth year and those who attend part-time are not eligible for university housing.

First-Year-Student Residence Halls. First-year students reside in first-year student houses, the majority of which are coed, located on East Campus. A faculty member lives in-residence in all but two of the first-year houses. All housing assignments are made by random lottery. Within the residence halls, single, double, or triple rooms are available.

Upperclass Residences. Upperclass students live in coed and single-sex residence halls on West and North Campuses and in the Central Campus Apartments, with a very small number residing on East Campus. There are two types of residence hall living groups, independent lottery and selective. Independent lottery living group spaces are filled by

a general housing lottery. The selective living groups, which include residential fraternities, select their own members. Also included among the selective houses are academically sponsored theme houses such as the Decker Tower Languages House, the Mitchell Tower Arts House, the Round Table, and the Ann Firor Scott Women's Studies House. Other selective houses include Spectrum, a multicultural theme house, the Women's Selective House (Cleland). ECHO (East Campus Housing Office) is located on East Campus and offers spaces to a small number of entering students each year. Each living group or house is governed by a House Council elected by the group's membership. Within all upperclass houses, except those located in Edens, there are triple as well as single and double rooms. Located on Central Campus is a complex of university owned and operated apartments which accommodates nearly 800 undergraduate students. The remainder of the complex houses a cross-section of students from various graduate programs. This facility is part of the undergraduate lotteried space.

University housing is considered to include all residence halls as well as Central Campus Apartments, and assignment to any of these areas fulfills the university's four-year housing guarantee to eligible students. Beginning with the 1995-96 academic year, entering students will be required to live on-campus for three years, and after that commitment has been met, they may consider moving off-campus or continue to enjoy their four-year housing guarantee option. Eligible students who choose to live off-campus may retain their resident status and eligibility for university housing if they follow the proper procedures as published by the Office of Student Development. The university provides free on-campus bus service, connecting East, West, North, and Central campuses.

All residence halls have resident advisors who live in-house and who are members of the Office of Student Development staff. These graduate and undergraduate students have broad responsibilities in the residence halls which include advising the house leaderships, serving as valuable resource persons for students with a variety of questions or personal concerns, and enforcing university policies when individual or group behavior fails to conform to the standards set forth by members of the university community.

Each house is located within a residential quadrangle, and a quadrangle council will be elected from its constituent members to perform the dual roles of programming and governance. The primary purpose of the quadrangle system is to establish and sustain a vibrant residential community, facilitated by a rich blend of intellectual and cocurricular pursuits. Quadrangle members will pay dues, set by the membership at an amount between \$15 to \$40 per semester, as a means of supporting the programming initiatives designed for the enrichment of the community in which they live. Representatives from each quadrangle council shall comprise the Campus Council which serves as the governing body to support and provide direction for residential life. A subcommittee of the Campus Council also will serve as an advisory body to the dean of student development, and will seek, through its action, to foster an environment of responsibility, initiative, and creativity on the part of all individual students and groups living in residence.

Residence Hall Programming. Educational and cultural programming is planned and presented throughout the year in the residence halls through the cooperative work of the Office of Student Development, Trinity College of Arts and Sciences, the School of Engineering, and resident students. In all but two of the first-year residence halls, faculty members live in the halls and participate in house activities during the academic year. The Faculty Associates Program pairs faculty members with living groups in an effort to facilitate engaging and intellectually stimulating endeavors within the residence halls. There are a number of seminar rooms located in several of the first-year houses. The goals of these various residentially-based programs are to enhance the quality of intellectual and social life for the residents on campus, to facilitate student-faculty interaction outside the formal classroom setting, and to develop a greater sense

of community within the individual residence halls as well as within the greater university.

Dining Facilities

All students living in campus residence halls are required to participate in a dining plan. Several dining plans are available, all of which allow a student to make purchases in a wide variety of dining locations by accessing a prepaid account carried on the student identification card, or Duke Card (see 'Food and Other Expenses' in the chapter "Financial Information"). Duke Dining Services provides cafeterias, restaurants, fast food operations, delis, snack bars, ice cream/dessert shops, and catering services.

Dining service operations are located on each campus. Facilities on East Campus include the East Food Court (a collection of food shops including Li'L Dino subs, a grill, international food station, salad bar/healthy food shop, pasta area, deli, pizza station, and a dessert/ice cream shop), the East Union Cafeteria, Upper East Side (snack bar), and the Magnolia Room (restaurant). On West Campus, students may use their dining plan in the Blue & White Room (cafeteria), the University Room (cafeteria), the Oak Room (restaurant), the Cambridge Inn (featuring the Weigh Station food bar, breakfast bar, deli, hot subs, pastry, and desserts), the Rathskeller Sports Bar (hamburgers, pasta, and sandwiches), Burger King (fast foods), and Licks (ice cream/frozen yogurt). North and Central Campus locations include Trent Drive Cafe and The Pub on Central Campus (specialty sandwiches, salads, and beverages).

University Catering accepts dining plan funds from individual students or student groups and will provide food and/or catering services for cookouts, study breaks, banquets, parties, or any other campus event. Students may also use the funds in their dining plan to purchase food items in three campus convenience stores: Uncle Harry's General Store on Central Campus, The East Campus Store on East Campus, and the Lobby Shop on West Campus. Dining plan funds may also be used to order pizza and sub sandwiches delivered to campus from participating area businesses.

Religious Life

Two symbols indicate the importance of religion to this university since its founding: *Eruditio et Religio*, the motto on the seal of the university, and the location of the Duke Chapel at the center of the campus. People from all segments of the university and the community gather in Duke Chapel on Sunday morning to worship in a service which offers excellent liturgy, music, and preaching. The world's outstanding Christian preachers have preached from the Duke Chapel pulpit.

The dean of the Chapel and the director of Religious Life work with the campus ministers and staff from the Roman Catholic, Jewish, and Protestant communities, and with other groups to provide a ministry which is responsive to the plurality of religious interests on the campus.

Through the religious life of the university, students are encouraged to search for meaning, to ask the ultimate questions, to worship, to meditate in the beautiful chapel, to learn from outstanding theologians from a wide array of traditions, and to work to bring about a more just and humane society.

Services Available

The Office of Student Development. This office works with the Duke student body in a variety of ways and is dedicated to creating a residential community supportive of a rich educational experience. It advises individual students regarding personal problems, houses undergraduates in the residence halls, and assists students to plan and present educational and cultural programs within the residence halls.

One hundred twenty-eight resident advisors (RAs), staff members of the Office of Student Development, reside in the residence halls and are directly responsible for the

administration of the student residences and their programs. Resident advisors guide and support the efforts of their respective house councils, serve as valuable resources for students with a variety of questions and needs, and enforce university policies when required.

Members of the Office of Student Development staff advise and support a number of residentially-based governing bodies, notably the East Campus Council, the eight quadrangle councils, and the Campus Council. The office also plans and implements New Student Orientation, coordinating the first-year-student advisory counselors (FACs), upperclass men and women assigned to a small groups of entering students, who, during orientation, welcome their groups and help to acquaint them with the university.

Judicial affairs are handled through the office by coordinating and applying the general rules and regulations of the university as well as working with all participants involved in the judicial process and coordinating the student advising system.

The Office of Student Development also works with transfer students and oversees the university's response protocol to student emergencies.

The Student Health Service. The Student Health Service, which provides medical care, advice, and education for all currently enrolled full-time students and part-time degree candidates, is administered by the Department of Community and Family Medicine, Duke University Medical Center.

The primary location for medical care is the Duke Family Medicine Center (Marshall Pickens Building) where students are seen, by appointment, for assessment and/or treatment. Students residing on East Campus may also use the East Campus Wellness Clinic in Wilson Hall for assistance in accessing appropriate clinical services. When a student's health needs warrant additional specialized treatment, the Duke Family Medicine Center serves as a portal of entry to other health resources within the Duke medical community. The infirmary, another Student Health facility, provides inpatient treatment of illnesses too severe to manage in residence halls or apartments, but not requiring hospitalization. If necessary, Duke Public Safety provides on-campus transportation to the health care facilities. A Student Physical Therapy Clinic in Card Gym is also available for treatment of sports-related injuries.

The health education component of Student Health is headquartered on the first floor of Trent Drive Hall. There is also a satellite office, called the Healthy Devil Health Education Center, on West Campus. A full-time health education staff is available to assist students in making informed decisions that lead to healthy lifestyles at Duke and beyond. Topics of concern and interest include alcohol and other drug usage, eating and nutrition, sexuality, and stress management. Programs, meetings, and consultations are provided for groups and individuals.

A list of students in the infirmary or hospital is routinely provided to the academic deans, who issue excuses to students when appropriate. However, information regarding the physical or mental health of Duke students is confidential, released only with the student's permission. This policy applies regardless of whether the information is requested by university officials, friends, family members, or health professionals not involved in the student's immediate care.

All currently enrolled full-time students and part-time degree candidates are assessed a Student Health Fee for each enrolled semester. This covers most of the services rendered within the Student Health Service. An optional Summer Health Fee for students who are not enrolled in summer sessions is also available through the bursar's office.

In addition to the Student Health Service, the university makes available a plan of accident and sickness insurance to protect against the high cost of unexpected illnesses or injuries which are not covered by the Student Health Fee and would require hospitalization, surgery, or the services of specialists. This insurance covers students both on and off campus, at home, or while between home and school during interim vacation

periods throughout the one-year term of the policy. All full-time students and part-time degree candidates are required to enroll in this insurance policy unless they show evidence that they are covered by other generally comparable insurance. This waiver statement, contained in the remittance form of the university invoice, requires that the name of the insurance company and policy number be indicated as well as the signature of the student or parent. International students, as well, are required to show proof of health insurance coverage (either the policy offered by Duke or comparable coverage) and may not assume responsibility for personal payment of health care cost.

Upon arrival on campus, all students receive a detailed brochure about the Student Health Service and the services covered by the Student Health Fee. Additional copies of the brochure are available at the Duke Family Medicine Center and at the Office of Student Development.

Counseling and Psychological Services. Counseling and Psychological Services (CAPS) provides a comprehensive range of counseling and developmental services in support of the academic endeavors of students. The professional staff is composed of psychologists, clinical social workers, and psychiatrists experienced in working with college students. They provide evaluation and brief counseling/psychotherapy for a wide range of concerns, including such issues as self-esteem and identity, family relationships, academic performance, dating, intimacy, and sexuality concerns. While students' visits with counselors are usually by appointment, emergencies are handled when they arise.

Each semester, CAPS offers a series of counseling groups and seminars focusing on enhancement of self-understanding and coping strategies. Support groups have been offered for second generation Americans; African-American students; students with bulimia; and gay, lesbian, and bisexual students. Seminars have addressed such topics as stress management, social skills development, and dissertation problems.

As Duke's center for administration of national testing programs, CAPS also offers a wide variety of graduate/professional school admission tests. The staff is also available to the entire university community for consultation regarding student development and mental health issues affecting not only individual students but the campus community as a whole. They work with campus personnel, including administrators, faculty, student health staff, religious life staff, resident advisors, and student groups, in meeting needs identified through such liaisons. Staff members are also available to lead workshops and discussion groups on topics of interest to students.

CAPS maintains a policy of strict confidentiality concerning information about each student's contact with CAPS. If a student desires information to be released, written authorization must be given by the student for such release. Evaluation and brief counseling/therapy as well as skills development seminars are covered by the student health fee. There are no additional costs for these services.

For additional information, see the *Bulletin of Duke University: Information and Regulations*, or call (919) 660-1000.

Career Development Center. The mission of the Career Development Center is to educate the students of Duke University in the arts of self-assessment, career exploration, career planning, and job hunting with the goal of helping them develop rewarding and fulfilling careers. The center primarily serves the students and alumni of Trinity College, the School of Engineering, and the Graduate School.

Career counselors are on staff helping students early in their lives at Duke to begin the process of discovering career interest. Career specialists then help students focus on specific career fields, including the arts, business, community service, education, engineering, mathematics, computer science and the physical sciences, government, health and life sciences, international careers, and mass media. Career specialists also work closely with the faculty and the deans of Trinity College in directing students interest towards effective application to graduate and professional schools.

Programs and services of the center include the Ventures Internship Program offering semester-long internships in local area businesses, the Health Careers Internship Program offering experiences at the Medical Center and elsewhere in Durham, the Service Learning Project offering stipends for summer work in community service, the On-Campus Recruiting Program offering interviews for summer and permanent positions with a wide variety of national organizations, and the Credential Service which collects and sends letters of recommendation.

The *Career Spectrum*, a career newsletter, is designed to keep students constantly aware of career-related opportunities on- and off-campus. Announcements of job openings, career seminars, workshops, and information sessions are posted each week. The Career Library and J.O.B. Room provide a wealth of printed and database materials on specific career fields and specific employers. An interactive online information system provides information at computer clusters located throughout the university and is available twenty-four hours a day. By using CareerNet, a student may review bulletins, information about the center, summer and full-time job listings, and register to participate in center programs.

Sexual Assault Support Services. Located in the Women's Center, the Office of Sexual Assault Support Services offers advocacy, support, and twenty-four hour crisis intervention services to survivors of rape, sexual assault, child sexual abuse, or relationship violence and to their friends and families. The S.A.S.S. coordinator coordinates peer support networks, trains groups such as the resident advisors and DARE (Duke Acquaintance Rape Education), and initiates ongoing educational programs to alert students to problems of sexual assault and interpersonal violence.

Services for Students With Disabilities. Duke University admits students without regard to disability and offers reasonable accommodations to the needs of students with disabilities. The Office of Institutional Equity has been designated to ensure that the university is in compliance with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act of 1990. Several other offices and individuals assist the office in a continuing effort to make its programs and services accessible to members of the Duke community. Undergraduate students who have special needs may seek assistance at the Premajor Advising Center. In particular, students with learning disabilities should consult the Academic Skills Center.

Offices for Program Planning

The Office of University Life. The Office of University Life helps enhance the climate of the campus through the programming efforts of such organizations as the University Union, the Duke Artists Series, Broadway at Duke, Duke Debate, the Craft Center, and through advising student clubs and organizations. The Bryan Center Information Desk is also under the auspices of this office.

The Office of University Life is responsible for the creation, coordination, and implementation of many of the cultural and popular entertainments which take place on campus. The office is responsible for the Chamber Arts Society Series; it also schedules the use of Page Auditorium and directs the use of this hall. For the Summer Session Office, this office directs the Duke University Summer Festival of the Arts and works with the Institute of the Arts. In addition to these arts-related activities, the Duke University Yearly Calendar is published and distributed from this office. All campus events should be recorded by the calendar office as early as possible in order to avoid conflicts. The office, through the Event Advising Center, also serves in an advisory capacity to student groups sponsoring and registering major events.

The Office of University Life also serves as a resource for student organizations, student leaders, the Duke University community and the community-at-large, in a manner which fosters an environment of trust and exploration of new experiences. As

such, the staff members serve as educators and direct service providers, developing a community that strives toward excellence. To these ends, the office promotes the development of leadership skills through a variety of programs which both educate and support individual students and student organizations, while recognizing and saluting their efforts; is the central resource for information concerning student organizations, acting both as a liaison and an advocate; facilitates the financial management of organizational funds, both providing counsel and direct services.

Another responsibility of the Office of University Life is advising the Duke University Union which was founded in 1955 "to promote social, cultural, intellectual, and recreational interaction among all members of the university community in such a way as to complement the educational aims of the university." Operating under a board consisting of undergraduate and graduate students, faculty, administrators, and university employees, the union's programming committees present a range of programs including touring professional theater, rock, pop, jazz and classical music concerts, film screenings, art exhibits, major speakers, crafts fairs and more constituting over 200 performances and presentations each year. In addition the union operates the on-campus television station (Cable 13), FM radio station (WXDU), a film production program and produces and markets the world's first annual college video yearbook. The union also operates craft centers on East Campus and West Campus and coordinates planning and operating policies of the Bryan Center. Union programming committees are open to any member of the Duke community.

The Mary Lou Williams Center for Black Culture was dedicated in memory of the "great lady of jazz" and former artist-in-residence whose name it bears. Since its beginning, the center has established its significance as the gathering place on campus where broadly-based issues of social/cultural relevance are addressed to an increasingly larger cross-section of the Duke Community. The center's audience includes greater numbers of students who are prepared to honor African-American history and culture. Such is addressed each year in many programs and events celebrating black possibilities and black successes. Among past programs have been art exhibits by renowned African-American artists, musical events, film series, film seminars, and a number of lecture-discussions of relevant topics. In addition, the center has expanded its programs from the particularly black to include Asian, Hispanic, Native American and Indian students, all of whom evoke new possibilities for multicultural appreciation. In the past several years, the center has been used increasingly by faculty, student, and employee groups for meetings, receptions, lunches, seminars, and programs.

The Women's Center. Located in 126 Few Fed, across the traffic circle from the Allen Building, the Women's Center works to promote the full and active participation of women in higher education at Duke by providing advocacy, support services, referrals, and educational programming on gender-related issues. Women's Center programs and services address a wide variety of issues, including leadership, safety, harassment, health, campus climate concerns, personal and professional development, and the intersection of gender with race, class, and sexual orientation. The center seeks to assess and respond to the changing needs of the university community, to raise awareness of how gender issues affect both women and men on campus, and to serve as an advocate for individuals and groups experiencing gender-related problems, such as sexual harassment or gender discrimination. Duke's office of Sexual Assault Support Services (providing twenty-four hour a day crisis counseling) is also housed in the Women's Center.

The center offers programming internships and work-study jobs to students; houses an art gallery and 2,500 volume feminist lending library; and publishes *VOICES*, a semesterly magazine addressing issues related to gender, ethnicity, and sexual orientation on campus and in the wider community. Additionally, the center advises and serves as a meeting place for student groups addressing gender issues on campus, including

the Women's Coalition, BASES (a student-to-student mentoring program for first-year women), WISE (Women in Science and Engineering), DARE (Duke Acquaintance Rape Education), and the Panhellenic Council. Open Monday through Friday, 8:30 a.m.-5:00 p.m., the center invites students to study in its lounge or browse through its library during business hours and makes its space available for student group meetings and programs in the evenings. Call 684-3897 for more information.

International House. International House is the center of cocurricular programs for over one thousand students at Duke from eighty-four countries, as well as for U.S. American students who have lived abroad, are interested in other cultures, are considering study abroad (see the section on study abroad in the chapter "Special Programs"), or are planning to travel outside the United States. The International Association, sponsored by International House and composed of both U.S. American and international students, plans social and cultural programs which emphasize personal contact and informal exchange of ideas among students from diverse backgrounds. Included are weekly open houses with lectures, discussions, films, potluck dinners or parties; and periodic trips outside of Durham.

Programs of International House which assist students from abroad in participating in the life of the Duke and Durham communities include an intensive orientation program at the beginning of the academic year; the International Friends Program, in which interested international students may become acquainted with U.S. American families or individuals; Duke Partners, in which an international student is paired with a U.S. American partner for weekly meetings to work on language and life skills; Speakers' Bureau, which arranges for international students to speak at civic and social groups as well as schools in the Durham community; and English conversation classes which meet four hours a week on campus. Another program, begun in 1993, is a group for "Global Nomads." "Global Nomads" are U.S. American and international students who have spent their formative years living outside their countries of passport due to a parent's or parents' work in the diplomatic corps, military, missionary field, international business areas, or in intergovernmental agencies. Further information may be obtained from International House, 2022 Campus Drive, (919) 684-3585.

Office of Intercultural Affairs. The Office of Intercultural Affairs (OIA) has responsibility for identifying and assisting with changes in the Duke University community which promote optimum growth and development for African-American, Asian-American, Latino-American, and Native American undergraduate and postbaccalaureate students. The office conducts such activities as public forums on student life, mentorship projects with university alumni, seminars on current issues for students of color, institutional research on development of students of color, and serves as a resource on issues of students of color for the university community.

The Community Service Center. The Community Service Center is a clearinghouse for the numerous volunteer and community service activities available to students, faculty, and employees. Through the center, members of the Duke community can become involved with student service groups and Durham area agencies doing everything from tutoring and mentoring, helping to care for people with AIDS, and serving meals at local homeless shelters, to befriending senior citizens and earning work-study money in any of over seventy community service internships. The Community Service Center also sponsors speakers, special events, training sessions, and many other programs. In these ways, the center strives to raise awareness about contemporary social issues, to provide opportunities for students to link their service work and coursework, and to be a catalyst for creative partnerships between Duke University and the wider community.

The Center for Lesbian, Gay, and Bisexual Life. The Center for Lesbian, Gay, and Bisexual Life (Center for LGB Life) provides multiple services to undergraduate, graduate, and professional students on lesbian, gay, and bisexual issues. The services include: 1) a safe haven to discuss issues of sexuality as they relate to self, family, friends, and others; 2) a friendly and comfortable location for lesbians, gays, bisexuals, and allies to socialize and discuss issues affecting the lesbian, gay, and bisexual community; 3) a place for groups to meet and organize activities; 4) a resource center and library containing magazines, books, and information by, for, and about lesbians, gays, and bisexuals; and 5) advocacy on lesbian, gay, and bisexual matters at Duke. Through these services, the Center for LGB Life presents opportunities for people to challenge intolerance and to create a more hospitable environment for lesbians, gays, and bisexuals at Duke. These services and programs offered by the Center for LGB Life are available to all students interested in lesbian, gay, and bisexual issues.

Student Organizations

Duke Student Government. The Duke Student Government (DSG) is the voice of the undergraduate student body of Duke University. DSG is responsible for articulating undergraduate student thought on issues relevant to the university and for working to improve the educational process and university environment. The working philosophy of DSG is that students have the right to participate in the university's decision-making process on matters that affect the student body. Coordinating the efforts of individuals and organizations, DSG lobbies university administrators on practices and policies which govern all facets of life at Duke.

The cabinet is responsible for the implementation of all legislative action and for the coordination of the organization. It consists of the president, five vice-presidents (executive, student affairs, academic affairs, facilities/athletic affairs, and community interaction), an executive secretary, administrative secretary, president pro-tem, chief of staff, attorney general, chief justice, director of public relations, director of student services, treasurer, and director of undergraduate computing.

The DSG legislature is composed of representatives from each undergraduate living group on campus, representatives of students living off campus and on Central Campus, and at-large representatives selected from the entire student body. Position statements and policies are initiated and debated through this body. Representatives then return to their constituencies to discuss the issues at hand. Within the legislative body, there are four standing committees which focus more closely on specific issues and projects. Every representative is required to participate on at least one standing committee. The Student Organizations Finance Committee (SOFC) is the only elected committee from the DSG legislature. The SOFC serves as both an appropriations and advisory committee for student-run organizations. It is responsible for presenting recommendations to the Legislative Body for the allocation of the student activities fee to various chartered student organizations.

DSG not only offers the opportunity for students to have input in university development, but also many unique student services. DSG's services seek to aid every undergraduate during his/her Duke career. These services include free legal advice, check cashing service, a pregnancy loan fund, a bail loan fund, and a computerized ride-rider service.

Cultural and Social Organizations. The scope of the more than three hundred student organizations is suggested by a partial listing of their names: Alpha Phi Omega service fraternity, Black Student Alliance, Baptist Student Union, Cheerleaders, International Association, Duke Ice Hockey, Outing Club, Sailing Club, Model United Nations Club, Photography Group, and the N.C. Rural Health Coalition. Sixteen National Interfraternity Council fraternities and ten National Pan-Hellenic sororities are repre-

sented on campus as are four fraternities and three sororities governed by the National Pan-Hellenic Conference.

Many opportunities are provided on campus in the areas of music and drama. The Chorale, Modern Black Mass Choir, Chapel Choir, Wind Symphony, Marching Band, Symphony Orchestra, and Collegium Musicum are examples of musical organizations. Duke Drama provides opportunities for non-drama majors to perform established and experimental drama; Hoof 'n' Horn presents musical comedy; Karamu performs drama related to the black experience.

Several academic departments sponsor organizations and programs for students with special academic or professional interests. There are over twenty academic department majors unions on campus. There are also academic and leadership honorary societies.

Media. *The Chronicle*, the campus newspaper, publishes five issues weekly and is governed by the *Chronicle* board. A humor magazine (*Carpe Noctem*), a literary magazine (the *Archive*), a feature magazine (*Tobacco Road*), a science magazine (*Vertices*), a photography magazine (*Latent Image*), Duke's black literary publication (*Prometheus Black*), a journal of campus opinion (*Open Forum*), *Eruditio*, a journal of politics, and *Blind Spot*, a magazine of science fiction and horror-inspired creative works are published on a regular basis by students. In addition, the *Duke Women's Handbook*, and a comprehensive yearbook, the *Chanticleer*, are produced each year. These publications are under the direction of the Undergraduate Publications Board, which chooses the editors and business managers and reviews the financial budgets of all such franchised publications. The *DukEngineer*, the official student magazine of the School of Engineering, appears twice each year and contains articles on technical and semitechnical topics as well as other matters of interest to the school. *VOICES* magazine, published by the Women's Center, addresses issues of gender, ethnicity, and sexual orientation. WXDU 88.7 FM is the student-managed and programmed radio station, broadcasting to the Duke and Durham communities. Duke Union Community Television (Cable 13) is operated by students and produces color television programs that are broadcast throughout the campus on the university cable system. The University Union produces *Yearbook*, Duke's video yearbook.

Project WILD. Project WILD (Wilderness Initiatives for Learning at Duke) is a unique student organization which, through the practice of experiential education (learning through doing), attempts to ease the transition period into college for Duke students. Run entirely by students, the program strives to teach self-worth, group awareness, and an appreciation of nature. The program has three primary components. The August Course is a twelve-day backpacking expedition in western North Carolina held prior to orientation. The House Course is taught each spring semester and includes a seven-day expedition. The Ropes Course Program is a two- to four-hour experience for groups or individuals and is available to the university community year round.

Health, Physical Education, and Recreation

Besides offering a variety of classes (see the chapter "Courses of Instruction"), the Department of Health, Physical Education, and Recreation also sponsors numerous programs for all students in intramurals, sports clubs, and recreation.

The Intramural Sports Program provides an opportunity for every student to participate in organized recreation competition in forty-nine activities. The program is comprised of four major areas: men's intramurals, women's intramurals, co-rec intramurals, and recreation programs. It is open to all graduate and undergraduate students of Duke University. Participation, not skill, is a major factor that is emphasized in the program.

Thirty-two sports clubs have been chartered by Duke students for those with similar interests to participate in competition and recreational activities. Clubs vary from those which compete with clubs of other universities, such as soccer, rugby, and ice hockey, to those of a more recreational nature such as cycling, and sailing, and one which yearly presents several performances, the water ballet club.

The university's many recreational facilities, available to all students, include the championship Robert Trent Jones Golf Course, tennis courts (some lighted) on both campuses, swimming pools on both campuses, three gymnasiums, a weight training room, squash and racquetball courts, outdoor handball and basketball courts, an all-weather track, numerous playing fields, jogging trails, and informal recreational areas. Tournaments in recreational sports are often organized and conducted by students. Students may reserve facilities and equipment at designated times.

Intercollegiate Athletics

The Athletic Department fosters intercollegiate athletics by striving for excellence and by providing the best possible framework within which highly accomplished student athletes can compete. The department has a dual responsibility to provide a high-quality athletic program and environment so that all students have the opportunity to compete to the fullest extent of their abilities. Duke is a member of the National Collegiate Athletic Association (NCAA) and the Atlantic Coast Conference (ACC). The ACC consists of Clemson, Duke, Florida State, Georgia Tech, Maryland, North Carolina at Chapel Hill, North Carolina State, Virginia, and Wake Forest.

The intercollegiate program for men includes football, soccer, basketball, cross country, swimming, fencing, wrestling, indoor and outdoor track, baseball, golf, tennis, and lacrosse. The women's athletic program provides intercollegiate competition in basketball, fencing, field hockey, golf, lacrosse, soccer, swimming, tennis, volleyball, indoor and outdoor track, and cross country. Freshmen may participate on all varsity teams.

The director of athletics and associate director of athletics provide departmental leadership and coordinate all athletic policies with the University Athletic Council. The council consists of representatives from the undergraduate student body, the faculty, the administrative staff, the trustees, and the alumni. The council meets with the director of athletics periodically during the school year. The chairman of the council is the official university representative at national and conference athletic meetings.

Duke University Undergraduate Honor Code

An essential feature of Duke University is its commitment to integrity and ethical conduct. The honor system at Duke helps to build trust among students and faculty and to maintain an academic community in which a code of values is shared. Instilling a sense of honor, and of high principles that extend to all facets of life, is an inherent aspect of a liberal education.

As a student and citizen of the Duke University community:

I will not lie, cheat, or steal in my academic endeavors.

I will forthrightly oppose each and every instance of academic dishonesty.

I will communicate directly with any person or persons I believe to have been dishonest. Such communication may be oral or written. Written communication may be signed or anonymous.

I will give prompt written notification to the appropriate faculty member and to the Dean of Trinity College or the Dean of the School of Engineering when I observe academic dishonesty in any course.

I will let my conscience guide my decision about whether my written report will name the person or persons I believe to have committed a violation of this Code.

I join the undergraduate student body of Duke University in a commitment to this Code of Honor.

Judicial System and Regulations

Duke University expects and requires of all its students full cooperation in developing and maintaining high standards of scholarship and conduct. Each student is subject to the rules and regulations of the university currently in effect, or which are put into effect from time to time by the appropriate authorities of the university. At the same time, the individual is responsible for decisions and choices within the framework of the regulations of the community, as Duke does not assume *in loco parentis* relationships.

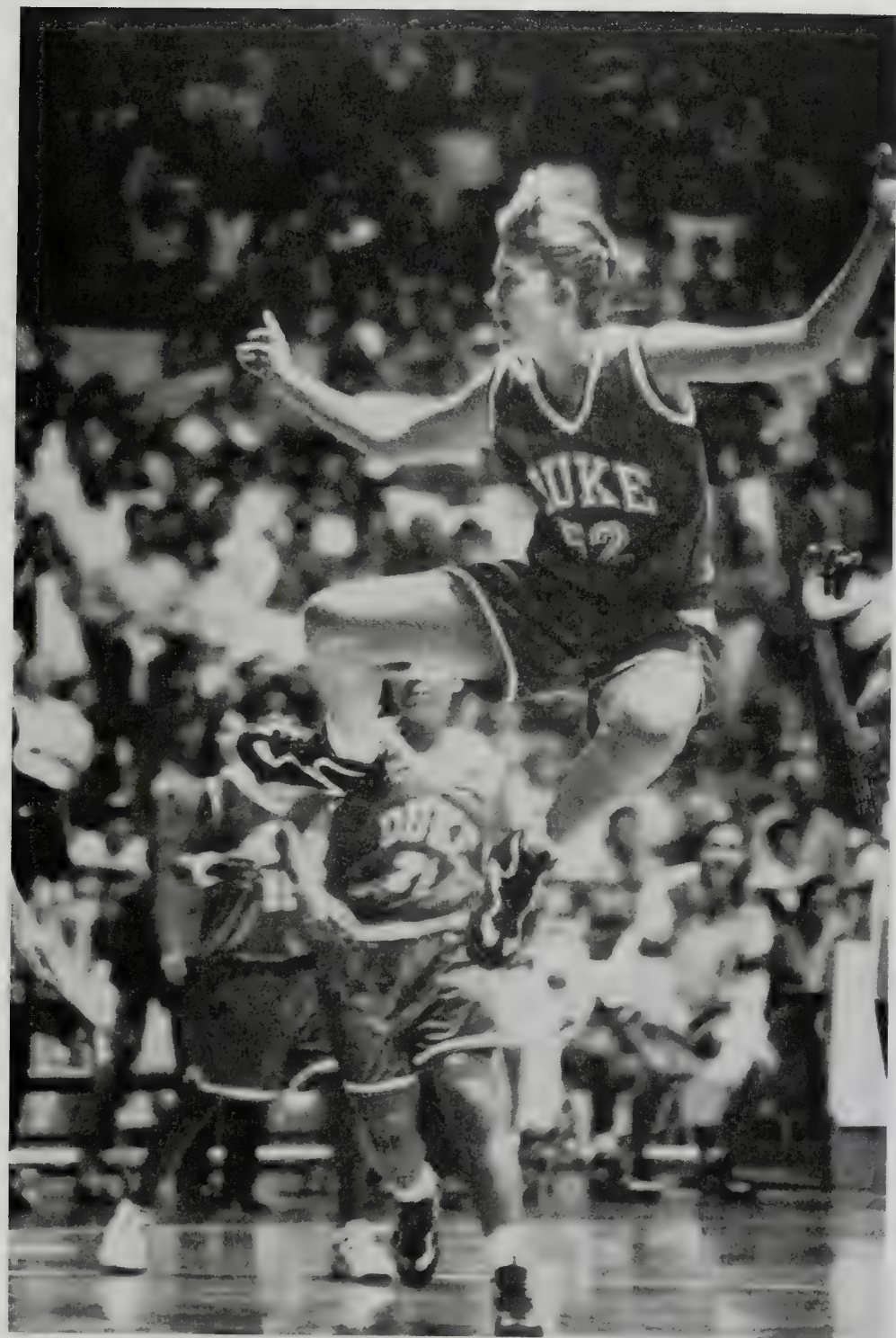
Students, in accepting admission, indicate their willingness to subscribe to and be governed by these rules and regulations. They acknowledge the right of the university to take disciplinary action, including suspension or expulsion, for failure to abide by the regulations or for other conduct adjudged unsatisfactory or detrimental to the university community.

Responsibility for prescribing and enforcing rules and regulations governing student conduct rests ultimately with the Board of Trustees of Duke University and, by delegation, with administrative officers of the university. In the undergraduate schools, and in the university as a whole, many of these rules have been established over the years by cooperative action between students, faculty, and administrative officers. Representative student organizations, such as student governments and judicial boards, and more recently, community-wide bodies of students, faculty, and administrators, have initiated proposals for policies and rules necessary to assure satisfactory standards in academic and nonacademic conduct. These proposals have been accepted by university officers and have become a substantial, if not all-inclusive, body of rules governing student life at Duke. For current regulations, refer to the *Bulletin of Duke University: Information and Regulations*.

Students in Trinity College of Arts and Sciences and in the School of Engineering constitute an undergraduate community whose members are subject to the Judicial Code of the Undergraduate Community. Violations of the code and its accompanying university regulations by individuals and residential or nonresidential cohesive units are adjudicated before the Undergraduate Judicial Board, composed of representatives of the student body, the faculty, and the academic administration. The Judicial Code of the Undergraduate Community, the constitution of the board, the procedural safeguards, and the rights of appeal guaranteed to students are published in the *Bulletin of Duke University: Information and Regulations* for the undergraduate community.

Student Obligations and Requirements

Students are expected to meet academic requirements and financial obligations, as specified elsewhere in this bulletin, in order to remain in good standing. Certain nonacademic rules and regulations must be observed also. Failure to meet these requirements may result in dismissal by the appropriate officer of the university.



Admission



Principles of Selection

James B. Duke, in his Indenture of Trust, requested that "great care and discrimination be exercised in admitting as students only those whose previous record shows a character, determination, and application evincing a wholesome and real ambition for life." Therefore, in considering prospective students, Duke University looks beyond the basic characteristics of academic competence possessed by the majority of applicants. It seeks, regardless of race, color, religion, national and ethnic origin, gender, handicap, sexual orientation or preference, or age, not only evidence of intellectual promise and maturity of judgment, but also a sense of life beyond the classroom. Often, this is expressed in the form of special talents and accomplishments; it is seen consistently in a student's determination to make creative use of the opportunities and challenges posed by Duke University.

Requirements for Application

As there are occasionally changes in admission policies or procedures after the printing deadline for the *Bulletin of Duke University: Undergraduate Instruction*, candidates are urged to consult the *Bulletin of Duke University: Undergraduate Admission* for specific admissions information, dates, and policies.

DEGREE STATUS

Although there are no inflexible requirements as to subject matter, students are urged to choose a broad and challenging high school program. Candidates for admission should present a minimum of four years of English and at least three of mathematics, natural sciences, a foreign language, and social studies. Applicants to the School of Engineering are advised to take four years of mathematics and at least one year of physics or chemistry.

All candidates for first-year standing must complete either the College Board SAT-I examination or the American College Test (ACT). Those students who choose to take the SAT-I should also complete three SAT-II exams, including the SAT-II Writing Subject test. Applicants for the School of Engineering should also take any SAT-II test in mathematics (level 1 or 2). Students wishing to continue study or gain course exemption in a foreign language should complete a SAT-II exam in that language. The SAT-I and

SAT-II should be taken by October of the senior year for Early Decision and by January of the senior year for Regular Decision.

Students choosing to take the ACT will not be required to submit SAT-I or II scores; however, the ACT will be used for admission only, not for placement or exemption. The ACT should be taken by October of the junior year for Early Decision applicants and by December of the senior year for Regular Decision applicants.

NONDEGREE STATUS

Summer Session. Persons who are or were at the time of leaving their home institutions in good standing in accredited colleges or universities may be admitted for summer study only by the director of the Summer Session.

Continuing Education. Admission as a continuing education student at Duke is limited to adults who live in the Triangle area; Duke graduates; persons who will be moving into the area and plan to reside here for a substantial period of time, for family and work reasons; and local high school seniors. These students are given academic counseling by the Office of Continuing Education; they are subject to most of the regulations set forth for degree candidates.

Application Procedures

DEGREE STATUS

A *Bulletin of Duke University: Undergraduate Admission* and an application may be obtained from the Office of Undergraduate Admissions, Duke University, Box 90586, Durham, North Carolina 27708-0586. A nonrefundable processing fee of \$60 must accompany the first part of the application. Students who would like to make use of the Common Application are encouraged to do so. The Common Application is generally available in secondary school guidance offices.

A personal interview at Duke is not required for admission; students who find it possible to visit campus, however, may call to request an interview. Area alumni interviews are also available for most applicants when Part I of the Duke application or the Common Application has been filed by the deadline. On-campus interviews cannot be granted from mid-December through May, when applications are under review.

Regular Decision. Candidates who wish to enter Duke as first-year students must submit a completed application no later than January 2 of their senior year in secondary school. Decisions are mailed from the university in early April, and accepted candidates are expected to reserve a place in the class by May 1 with a nonrefundable deposit of \$500.

Early Decision. Students for whom Duke is a clear first choice may apply for Early Decision. Candidates who apply for early decision are required to sign a statement confirming their commitment to enroll at Duke if they are admitted in the early decision process and to withdraw applications from other colleges and universities as soon as they learn of their admission to Duke. Students may apply to only one school under a binding early decision plan. Duke reserves the right to withdraw the applications of students accepted to other schools under binding early decision plans. Secondary school counselors and parents are also asked to sign the early decision agreement.

Students applying for Early Decision should submit a completed application by November 1. The SAT I and II or the ACT examinations should be taken no later than October of the senior year. Early Decision applicants who have not completed their standardized tests may be deferred to Regular Decision. Applicants are notified of their status—admit, defer, or deny—by mid-December. Admitted students pay a nonrefundable deposit of \$500 by January 2. The credentials of candidates who are deferred are considered along with candidates for Regular Decision. Deferred students are no longer

bound by the early decision agreement and are free to accept offers of admission from other colleges and universities.

This plan is designed to give well-qualified students who know Duke is their first choice a means of indicating that commitment to the university and of receiving a decision early enough to eliminate the necessity of applying to several colleges.

Midyear Admission. Midyear admission, when offered, allows a limited number of students to begin their college work a semester early or to postpone matriculation for a semester. Midyear applicants are expected to complete all the requirements for fall admission. The application deadline for new candidates is October 15; students will be notified of the decision on their applications by November 15, with the expectation that those who are accepted will reply by December 1 with a nonrefundable deposit of \$500. **Midyear admission is not offered each year and has not been offered during the last several years. Interested candidates should consult the admissions office to see if the program is offered in the coming year.**

Transfer Admission. Transfer admission from other accredited institutions may be arranged for a limited number of students each semester. Because the transcript of at least a full year of academic work is preferred by the Admissions Committee, and because transfer students are required to spend their last two years at Duke, most candidates apply to Duke preceding or during their second year of college. Candidates submit official transcripts of all work completed at other accredited colleges, high school records, scores on the SAT I or ACT, and employment records if there has been an extended period of employment since graduation from secondary school, along with completed application forms. See the section on transfer credit in the chapter "Academic Procedures and Information."

September (fall semester) transfer students submit a completed application by April 1, learn of their decisions by May 15, and respond to the university by June 1 with a nonrefundable deposit of \$400, or \$500 if housing is requested. January transfer students submit a completed application by October 15, learn of their decisions by November 15, and reply to the university by December 1.

NONDEGREE STATUS

Summer Session. Application forms and schedules of courses may be obtained by writing or calling the Office of the Summer Session, Box 90059, Duke University, Durham, North Carolina 27708-0059, (919) 684-2621. No application fee is required.

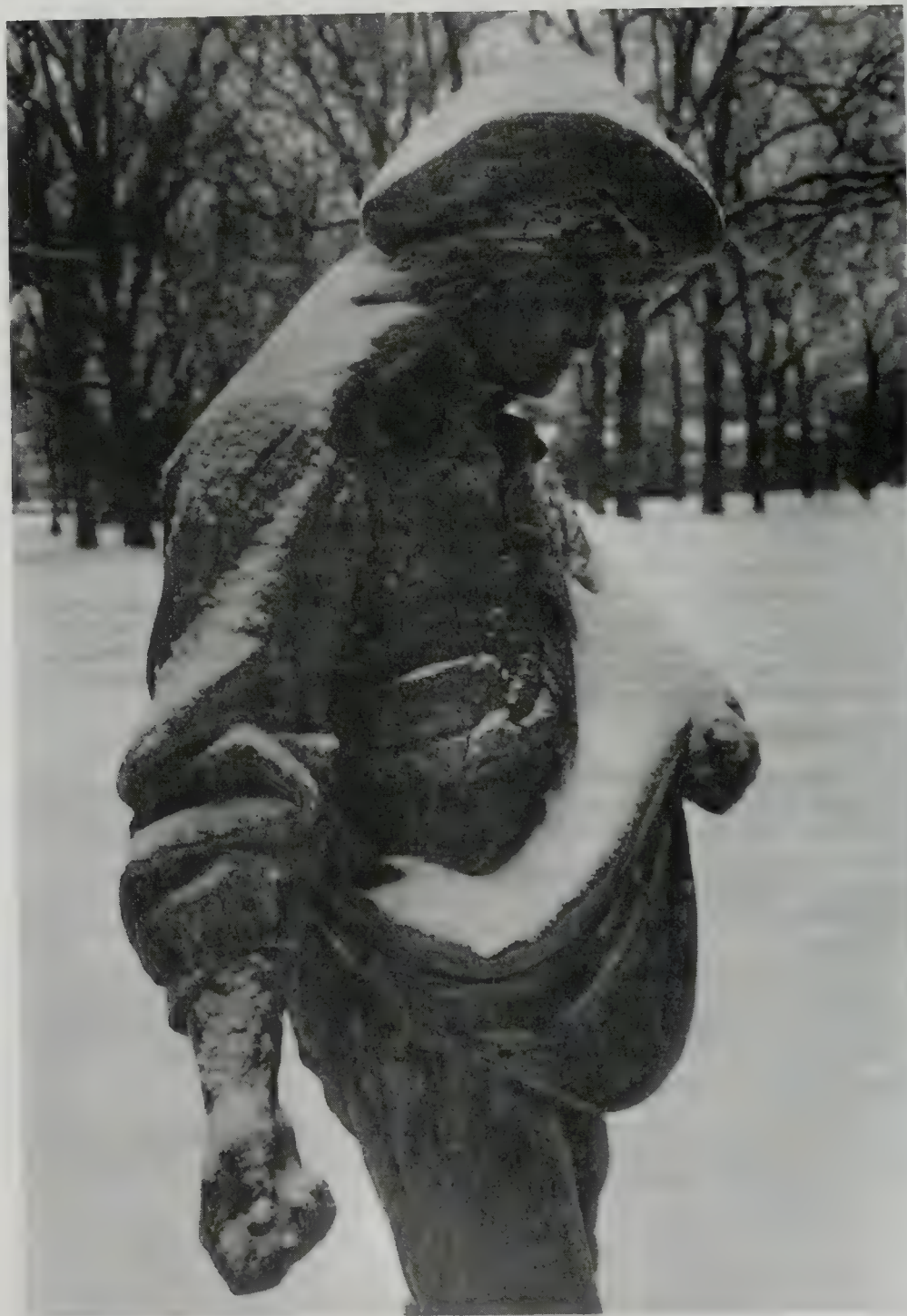
Continuing Education. Applications may be obtained from the Office of Undergraduate Admissions and must be returned to that office, accompanied by a \$35 application fee, by August 1 for the fall semester and by December 1 for the spring semester.

A certain grade point average over four courses must be attained before a nondegree student may apply for degree candidacy. More detailed information on nondegree course work through Continuing Education is available from the Office of Continuing Education, Box 90700, Duke University, Durham, North Carolina 27708-0700.

READMISSION OF FORMER STUDENTS

A student who desires to return, following withdrawal from college, should apply directly to the appropriate college or school. (See the section on readmission procedures in the chapter "Academic Procedures and Information.")

Financial Information



Tuition and Fees*

No college or university can honestly state that an education at the college level is inexpensive. Fees paid by students cover less than half the cost of their instruction and the operation of the university. Income from endowment and contributions from alumni and other concerned individuals meet the balance and assure each student the opportunity to pursue an education of unusually high quality.

Students are urged to give their attention first to the selection of institutions which meet their intellectual and personal needs, and then to the devising of a sound plan for meeting the cost of their education. This process will require an in-depth knowledge of both the university's financial aid program and the resources of the student's family. A brochure describing in detail the various forms of financial aid may be obtained from the Office of Undergraduate Financial Aid, Box 90397, Duke University, Durham, North Carolina 27708-0397.

Estimated Expenses. * Certain basic expenditures, such as tuition, room, and board, are considered in preparing a student's budget. These necessary expenditures, with a reasonable amount allotted for miscellaneous items, are shown below:

	<i>Academic Year, 1997-98 (two semesters)</i>	<i>Two Summer Terms, 1997 (one semester equivalent)</i>
Tuition		
Trinity College	\$21,550	\$5,940-6,930
Engineering	\$22,410	\$5,940-6,930
Residential Fee		
Single Room	\$4,693-5,631	N/A
Double Room	\$3,534-4,241	\$880
Food		
100% board plan	\$3,560	\$1,270**
75% board plan	\$2,990	\$790**
Books and Supplies	\$720	\$336
Student Health Fee	\$416	\$132
Recreation Fee***	\$100	

*The figures in this section are projections and are subject to change.

**These estimates are for use with debit accounts.

***This fee applies to students matriculating fall 1996 and after.

It should be realized that additional expenses will be incurred which will depend to a large extent upon the tastes and habits of the individual. The average Trinity College student, however, can plan on a budget of approximately \$30,900. The budget estimate for the summer (two terms, one semester equivalent) is \$8,550. These budgets are all-inclusive except for travel costs and major clothing purchases.

Registration Fees and Deposits for Fall and Spring. On notification of acceptance, students are required to pay a nonrefundable first registration fee of \$40, a one-time transcript processing fee of \$30, and to make a deposit of \$430. The deposit will not be refunded to accepted applicants who fail to matriculate. For those who do matriculate \$100 of the deposit serves as a continuing residential deposit for successive semesters, and the remaining \$330 serves as a continuing registration deposit.

Late Registration. Continuing students who fail to register during the registration period must pay a fee of \$50 to the bursar.

Part-Time Students. In the regular academic year, students who with permission register for not more than two courses in a semester will be classified as part-time students. Part-time students will be charged at the following rates: one course, \$2,694 (engineering, \$2,801); half course, \$1,347 (engineering, \$1,401); quarter course, \$673 (engineering, \$700). Registration for more than two courses requires payment of full tuition. Graduate students registered for undergraduate courses will be assessed three units for nonlaboratory courses and four units for laboratory courses. Men and women in nondegree programs who are being considered for admission to degree programs, as designated by the Office of Continuing Education, pay fees by the course whether the course load is one, two, or three courses.

Auditing one or more courses without charge is allowed for students paying full fees, provided that the consent of the instructor is obtained. Students who are enrolled for one or two courses may audit other courses by payment of \$269 for each course audited. With the consent of the appropriate instructor and the director of Continuing Education, graduates of Duke may audit undergraduate courses for the above payment per course.

Payment of Accounts for Fall and Spring. The Office of the Bursar will issue invoices to registered students for tuition, fees, and other charges approximately four to six weeks prior to the beginning of classes each semester. The *total amount due* on the invoice is payable by the invoice late payment date which is normally one week prior to the beginning of classes. Inquire at the bursar's office, (919) 684-3531, if an invoice has not been received three weeks prior to the first day of classes, so that payment can be forwarded while a duplicate invoice is issued to document the balance owed. As part of the admission agreement to Duke University, a student is required to pay all invoices as presented. If full payment is not received, a late payment charge as described below will be assessed on the next invoice and certain restrictions as stated below will be applied. Failure to receive an invoice does not warrant exemption from the payment of tuition and fees nor from the penalties and restrictions. Nonregistered students will be required to make payment for tuition, fees, required deposits, and any past due balance at the time of registration.

Monthly Payment Option. The Monthly Payment Option Plan allows students and their parents to pay all or part of the academic years expenses in ten equal monthly payments from July 1 to April 1. The only cost is an annual, nonrefundable fee of \$95. The participation fee can be paid by Visa or Mastercard. Payments may be made by check or by bank draft. Questions regarding this plan should be directed to Tuition Management Services, 1-800-722-4867 or 401-849-1550. At renewal, the plan can be extended to twelve months. The monthly payments can be increased or decreased without additional cost.

Late Payment Charge. If the total amount due on an invoice is not received by the invoice late payment date, the next invoice will show a penalty charge of 1 1/4 percent per month assessed on the past due balance regardless of the number of days past due.

The past due balance is defined as the previous balance less any payments and credits received on or before the late payment date and also any student loan or scholarship memo credits related to the previous balance which appear on the invoice.

Restrictions. An individual will be in default if the total amount is not paid in full by the due date. A student in default will not be allowed to register for future semesters, to receive a transcript of academic records, have academic credits certified, or receive a diploma at graduation. In addition, an individual in default may be subject to withdrawal from school and have the account referred to a collection agency. If an account is referred to a collection agency, the individual will be responsible for all applicable collection and/or court costs.

Fees for Study Abroad. Students who register to study abroad on programs administered by institutions other than Duke University will pay the tuition and fees of the administering institution. There will be a fee of \$1,650 per semester, or \$825 per each summer session, payable to Duke University to maintain a student's enrollment at Duke.

Fees for Courses. Additional fees are charged for certain physical education activity and applied music courses. For specific charges, consult the Office of the Bursar.

Tuition and Fees for Summer Session. Tuition for undergraduates is \$1,485 for each 3 semester hour (s.h.) course, \$1,980 for each 4 s.h. course, \$990 for each half course (2 s.h.), and \$2,970 for each one and one-half course program (6 s.h.) offered at the Marine Laboratory.

Tuition for graduate students taking an undergraduate course is as indicated above.

Health Fee. All Duke students and all full-time non-Duke students are required to pay \$66 per term. All students at the Marine Laboratory are required to pay \$56 per five-week registration period.

Music Fee. A fee of \$152 will be charged for Music 81 and 85. A fee of \$305 will be charged for Music 91 and 95. A fee of \$85 will be charged for Music 79.

Auditing Fees. With permission of the instructor, students registered for a full course program (two courses) may audit one nonlaboratory course except a physical education and dance activity course, a studio art course, an applied music course, and foreign programs. No extra charge is made.

Students carrying less than a full course program may be granted permission by the instructor to audit a course (the above exceptions apply) but must pay half the university fee (\$742.50) for the course if it is in Arts and Sciences. Professional school course audit policies may differ.

Payment of Tuition and Fees. The university does not mail statements in time to meet summer session tuition deadlines. All summer tuition and fees (which students must calculate from the information above) and any past due balance should be paid in the Office of the Bursar (101 Allen Building) at least five full working days prior to the beginning of the term (see Summer Session calendar). Students paying by mail may forward payment to the Office of the Bursar, Box 90035, Duke University, Durham, North Carolina 27708-0035. Students who fail to pay tuition and fees and/or otherwise fail to clear with the bursar by the end of the drop/add period may be withdrawn from their courses. These withdrawn students will be billed the health fee and an administrative withdrawal fee of \$150 per course (\$75 per half-course) for which they were registered. (See the section on Refunds and Administrative Withdrawal Charges concerning penalties in this chapter). Students who, subsequent to withdrawal, clear with the bursar may, with written permission of their academic dean, be reinstated in their classes as originally registered. The administrative withdrawal fee will stand and the student will be liable for full tuition and fees. Students who are unable to meet these deadlines should consult with the bursar and their academic dean prior to the deadline.

Transcripts. Requests for transcripts of academic records should be directed to the associate registrar. Ten days should be allowed for processing. Transcripts may be withheld for an individual whose student loan account is past due.

Duke Employees. With the permission of their supervisors, employees may, through the Office of Continuing Education and Summer Session, take up to two courses for credit or audit during any one semester or one during a summer term. A formal application for credit course work must be submitted by August 1 for the fall semester or December 1 for the spring semester. No formal application is required for auditing. Half-time employees with one or more years of service who receive permission to take such courses will be charged one-half the tuition rate shown above for part-time students during the fall and spring and one-half of the summer tuition rate. This benefit applies only to nondegree work. Full-time (thirty or more hours a week) employees with two or more years of service who receive permission to take such courses will be charged one-tenth the tuition rate for credit course work and will be permitted to audit at no charge. This benefit continues after degree candidacy has been attained. Eligible employees should consult the Benefits Office, 705 Broad Street (919) 684-6723, at least one week in advance of payment date to obtain the appropriate tuition voucher. The director of Continuing Education and Summer Session is available to advise Duke employees on educational matters (919) 684-6259.

Living Expenses*

Housing for Fall and Spring. In residence halls for undergraduate students the housing fee for a single room ranges from \$4,693 to \$5,631 for the academic year; for a double room, the fee ranges from \$3,534 to \$4,241 per occupant.

Detailed information concerning the student's obligations under the housing contract and the consequences of failure to comply are published in the *Bulletin of Duke University: Information and Regulations*.

Housing for Summer. For detailed information on types and costs of accommodations available at Duke University for the Summer Session write: Department of Housing Management, 218 Alexander Avenue, Apartment B, Durham, North Carolina 27705.

Food and Other Expenses. Duke Dining Services and Duke University Stores operations are located on campus to serve the needs of the Duke community. The university identification card, known as the DUKECARD, can be used to gain access to prepaid accounts and make purchases in many Duke University facilities.

The first-year student dining program is a hybrid plan that includes twelve prepaid meals per week at The Marketplace at East Union; plus dining plan debit account "points" for use at any of four cafeterias, six fast food locations, two restaurants, three coffee bars, three convenience stores, concessions at athletic events, sodas and snacks from vending machines, and late night pizza and sub delivery from ten local commercial vendors. The cost of the First Year Plan is \$1,125 per semester for the twelve-meal plan plus one of three "points" plans (Plan G-I) which range from \$415 to \$540. Participation in the First Year Plan is required of all first-year students who reside on East Campus.

Upper class students who live in the residence halls are required to participate in one of five dining plan debit accounts which allows access to all dining services. The five plan levels (Plan A - Plan E) range from \$1,090 to \$1,780 per semester. Upper class students who live in Central Campus apartments are also required to participate in the dining plan, but may choose to do so at the lower minimum requirement of Plan J (\$805 per semester). An optional five meal per week plan is also offered to

* The figures contained in this section are projections and are subject to change prior to the beginning of the fall 1997 semester.

upper class residents of East Campus; the cost is \$620 per semester for five meals per week plus “points” plan K for \$625. Nonresident students are not required to participate in the dining plan; however, Plan F at a cost of \$415 per semester is offered as an option.

An optional summer dining plan is provided in three plan levels ranging from \$160 to \$615 per summer term.

Students may also purchase a Flexible Spending Account (FLEX) which can be used to purchase any goods or services from Dining Services, Duke Stores, and other campus operations. FLEX is optional and may be opened with a minimum balance of \$25. Additional funds may be deposited to either the FLEX or dining plan debit account at any time.

Information regarding these accounts is sent to matriculating students. For more information about campus retail and food facilities, see the chapter “Campus Life” in this bulletin.

Fall and Spring Refunds

In the case of withdrawal from the university, students or their parents may elect to have tuition refunded or carried forward as a credit for later study according to the following schedule:

Withdrawal	Refund
Before classes begin	Full Amount
During first or second week	80 percent
During third, fourth, or fifth week	60 percent
During sixth week	20 percent
After sixth week	None

Tuition charges paid from grants or loans will be restored to those funds on the same pro rata basis and will not be refunded or carried forward. In the event of death, a full tuition, fees, and residence hall refund will be granted. In case of a call to military service, a full semester’s tuition, full purchase price of textbooks from the university’s book store, and the pro rata amount of the room charge will be refunded. The outstanding balance of the food service plan will be refunded in case of military service or death.

In the case of dropping special fee courses (e.g., music, art, golf), or of part-time students dropping audit courses, a full refund will be granted students during the drop-add period. Students changing status to part-time are required to request permission at the time of preregistration; therefore, no refunds are granted during the drop/add period or subsequently for changes which involve carrying less than a full-time load.

The registration deposit will be refunded to students whom the university does not permit to return, who graduate, or who request the refund prior to registration, thereby indicating their intention not to return for the following semester. The registration deposit will not be refunded to students who register for the following semester but fail to enter. Arrangements for refund of the \$100 residential deposit are described in the housing contract.

The remaining balance is any registration deposit applicable to a graduated student who did not reside on campus in the semester preceding graduation will be refunded within four weeks following graduation. The remaining balance of both housing and registration deposits applicable to a graduated student who did reside on campus in the semester preceding graduation will be refunded within seven weeks following graduation.

Because Duke University participates in the Title IV federal aid programs, it follows federal guidelines with respect to the refund and repayment of these funds. All first-time students who withdraw within 60 percent of the enrollment period will have their charges and financial aid adjusted according to the federal regulations. Additional information regarding this procedure may be obtained from the Office of Financial Aid.

Summer Administrative Withdrawal Charges and Refunds*

Drop or Administrative Withdrawal Charges. Students who will not be attending a summer term or course for which they have registered (i.e., have scheduled a course through the telephone registration system) must officially drop the course(s) prior to the beginning of the term whether or not they have paid tuition and fees. (See the section on course changes for the summer term in the chapter "Academic Procedures and Information.") Students who fail to drop the course(s) prior to the beginning of the term will be charged \$150 per course (\$75 per half-course or audit registration).

Refunds (Except Foreign Programs). Students who will not be attending a summer term or course for which tuition and fees have been paid are eligible for refunds following these policies:

1. There is a financial obligation of full tuition and fees if the student drops a course(s) or withdraws from the term after the third day.
2. There is a financial obligation of \$150 per course (\$75 per half-course) if the student officially drops a course(s) or withdraws from the term during the first three days. The health fee is not refunded. (There is no charge for drop/adds that result in no change in course load in the same term.)
3. Full tuition and fees are refunded if the student officially drops a course(s) or withdraws from the term before the first day.

Student Aid

Duke University is strongly committed to its financial aid program and, for the four years of undergraduate enrollment, will meet 100 percent of the demonstrated need of each eligible admitted student. The university's aid program includes both merit and need-based scholarships, work-study, the Federal Pell Grant Program, the Federal Perkins Loan, and the Federal Stafford Student Loan Program. Because admissions decisions are made without reference to a student's application for aid, students needing assistance are strongly encouraged to apply for financial aid at the same time as for admission. Students awarded financial aid will be notified at the same time that they are offered admission.

For the student with demonstrated need, the net cost of an education at Duke University will generally be no greater than that for attendance at any private college or university. It is the intention of the Office of Undergraduate Financial Aid to set each award at a level consistent with a family's ability to meet the costs of attending Duke University. This will be done by taking into consideration the contribution that can reasonably be expected from the student, the family, and any available outside sources. During the current academic year, over 40 percent of the student body receives more than forty-eight million dollars in aid of various types.

Financial Aid for Entering Freshmen. Candidates should initiate their application for financial aid concurrently with their application for admission. Instructions outlining the specific requirements and deadline dates will accompany application materials. To receive institutional funds, two forms must be submitted, the Free Application for Federal Student Aid (FAFSA) to the federal processor and the PROFILE application to the College Scholarship Service. Students applying for federal loans and grants need to complete only the FAFSA. The custodial parent should submit the PROFILE and FAFSA. The noncustodial parent must submit the Divorced/Separated Parent's Statement. A copy of all pages, including schedules and attachments, of both parents' and student's current federal income tax form must be submitted to the Financial Aid Office on or before May 1. Information provided on the PROFILE will be verified through the use of the tax return.

*This policy does not apply to foreign program students.

Financial aid recipients wishing to operate a motor vehicle on campus must first register it with the Financial Aid Office. As an automobile represents an asset, the value of a financial aid recipient's car will be considered in the estimation of a student's need. As a general rule, a student's annual contribution will be increased by 35 percent of the value of the car.

Renewal of Financial Aid after the Freshman Year. Each year students must file an application for renewal of financial aid. This application must include a new PROFILE form, a new Free Application for Federal Student Aid, and a copy of all pages, including schedules and attachments, of the parents' and student's current federal income tax return. Application packets are available in mid-December. The deadline for the receipt of all application materials by the Financial Aid Office is May 1. Failure to meet this deadline will affect the type and amount of aid offered. All qualified students may receive need-based aid for up to eight semesters. Under certain circumstances consideration will be given to a ninth semester of eligibility.

To have financial aid renewed, a student must meet the continuation requirements outlined in the chapter "Academic Procedures and Information," as appropriate. Students not qualifying for financial aid due to their inability to meet these requirements may appeal directly to the Financial Aid Office. Students holding merit scholarships are required to maintain an average considerably higher than the minimum required for need-based financial aid recipients. Specific details regarding retention standards are outlined on page 106 and will be provided to scholarship winners.

Summer School Financial Aid. Limited financial aid is generally available for each summer session. Interested students can obtain specific details as to available funding and an application through the Financial Aid Office in March of each year.

Types of Financial Aid. Gift scholarships or grants, long-term loans, and employment are integral parts of the financial aid program, and some portion of the aid offered an undergraduate is normally in each of these forms.

The work-study opportunity and loan(s) offered as financial aid are considered to be the self-help portion of the award. The standard aid package at Duke provides that the first \$3,700 to \$6,300 of each student's need be awarded in the form of self-help funds. Funds awarded in excess of this amount will generally be grant funds. This combination of university grant funds and opportunities for self-help enables Duke to extend its resources to a larger number of deserving students.

Duke has a number of scholarships based on merit which are available from personal endowments and corporations. Most are intended for entering freshmen. These scholarships may be based on achievement in a particular field or on an outstanding overall record.

Gift Scholarships. The following are among the named gift scholarships offered through Duke University. Where specified, these scholarships are renewable for four (4) years of undergraduate study for those students meeting the following academic standards:

Renewable merit scholarships will be continued for freshmen who complete the first year of studies with a 2.8 average or higher. Upperclass students must complete each academic year with a 3.0 average or higher. Students failing to meet these standards will be placed on probation for one semester during which they must maintain a 3.0 average or higher. Failure to maintain a 3.0 average or higher in subsequent semesters will lead to cancellation of the scholarship.

Angier B. Duke Memorial Scholarships. The Angier B. Duke Memorial Scholarships, competitively awarded on the basis of academic merit, have been established to encourage the intellectual achievement of men and women by recognizing those who possess outstanding academic and leadership abilities. Candidates are selected on the basis of intellectual performance, creative talent, and promise of being eventual leaders in whatever field of endeavor they choose. The scholarship is a four-year program (eight

semesters), and a student's continuation in the program is contingent upon good academic performance. All 1996-97 freshman scholarship holders received \$20,520 if enrolled in Trinity College of Arts and Sciences, and \$21,340 if enrolled in the School of Engineering. Students demonstrating additional need will receive a grant from Duke University funds up to the amount needed. All Angier B. Duke Scholars are eligible to participate in a six-week summer study program at Oxford University in England after the junior year. Under the Oxford program the scholarship pays tuition, single room accommodation, full board, designated excursions for all scholars, and an allowance for transatlantic air fare between New York and London. Those choosing not to participate in the Oxford program are eligible for a \$2,000 grant for an approved independent project. At least one of the four years of the scholarship could be used abroad on an approved program.

W. N. Reynolds Memorial Scholarships. Recipients of these awards are students with outstanding ability and/or need who show promise of constructive leadership. In considering candidates for the awards, consideration will be given in the following order: (1) children of employees of R. J. Reynolds Tobacco Company or any of its affiliates or subsidiaries; (2) children of families residing in Forsyth County, North Carolina; and (3) other candidates who are residents or natives of North Carolina. There are a number of awards available for each freshman class with a minimum value of \$500.

Lionel Hampton Scholarship. This award of \$500 (not renewable) is given to an incoming freshman who demonstrates high proficiency in a musical instrument and strong potential in jazz performance.

United Methodist Scholarships. A number of United Methodist Scholarships are available on a basis of demonstrated need to Methodist students who have given evidence of leadership in their local Methodist Youth Fellowship groups.

Alice M. Baldwin Scholarships. One or more of these scholarships, varying in amount from \$500 to \$2,500, are awarded to women who are rising seniors in Trinity College of Arts and Sciences on the basis of scholarship, character, leadership, and need.

Panhellenic Scholarship. A scholarship of approximately \$1,000 is awarded to an upperclass woman in Trinity College of Arts and Sciences on the basis of scholarship, character, leadership, service, and need.

J. A. Jones Memorial Scholarships. These scholarships, sponsored through the Jones Fund for Engineering, are awarded to engineering students whose outstanding academic and personal qualifications suggest that they will become leaders in a technological society. The awards range from \$1,000 to \$3,000, depending on each recipient's financial need.

Robert H. Pinnix Scholarships. The Robert H. Pinnix Scholarships are awarded annually to two upperclassmen enrolled in the Duke School of Engineering. The award is based upon demonstrated ability, excellence in engineering, and financial need.

Richard Miles Thompson Scholarships. The Richard Miles Thompson Scholarships are awarded annually to two upperclass students enrolled in the School of Engineering. The awards are based upon academic merit and demonstrated financial need.

The Mary Duke Biddle Scholarship in Music Composition. This scholarship with a stipend of up to \$3,500 per year is available to a member of each entering class. It is renewable annually as long as the student meets the required standards for renewal. Students wishing to apply for this award will be required to submit examples of their composition. Eligibility is limited to students planning to major in music.

The William O'Connor Memorial Scholarship. This music scholarship of up to \$2,500, established by the Mary Duke Biddle Foundation in honor of William O'Connor and in appreciation for his many years of service to the foundation, is awarded to student of a string instrument or organ.

The A. J. Fletcher Scholarship. This scholarship of \$7,500 is offered annually to an incoming first-year student, who intends to major in music and who can demonstrate, by tape or audition, talent and achievement in instrumental or vocal performance, or in the case of composition, by submission of a representative portfolio. It is renewable annually as long as the student makes satisfactory progress.

Air Force ROTC College Scholarship Program. Students can apply for three-year scholarships during their freshman year and two-year scholarships during their sophomore year. Scholarships are available to qualified students who major in most fields, primarily scientific or engineering. The scholarships include tuition, fees, and textbook reimbursement, plus a \$150 per month tax-free allowance.

Army ROTC Scholarship Program. All freshman and sophomore students are eligible to apply for Army ROTC scholarships. Awarded without regard to academic major, these grants pay a portion of tuition, fees, and textbook/equipment costs in addition to providing a tax-free monthly stipend of \$150 for the balance of the student's normal period to graduation. Commissioned service, following graduation, can be either on active duty or with the reserve forces as determined by the Secretary of the Army. Additional information concerning Army ROTC scholarships is available from the professor of military science.

Navy ROTC College Scholarship Program. This program provides for up to four years' tuition and textbooks, laboratory fees, and a \$100 per month stipend. These scholarships, based upon academic achievement, leadership potential, and overall performance, can be awarded at any stage of the student's college career through either a nationwide selection process or by the professor of naval science at the university. In addition, two other two-year scholarships are available to rising juniors: one leads to a career in nuclear power, and the other follows a summer attendance at the Naval Science Institute at Newport, Rhode Island. For further information on any of the above scholarship programs, contact the professor of naval science.

Reginaldo Howard Scholarships. These scholarships, awarded annually to freshman African-American students, are provided to honor the late Reggie Howard, first black president of the student government. Seven scholarships for \$6,000 are awarded each year. Scholarships are available for the four years of undergraduate study as long as the student maintains the academic average specified for renewal.

The Anne McDougall Memorial Award. The Anne McDougall Memorial Award for Women is awarded each year to one woman student studying psychology or a related field. Administered through women's studies, this \$1,000 award is intended to provide encouragement and support for women who wish to pursue academic study and continue in the area of human service.

The Janet B. Chiang Memorial Scholarship Fund. This fund was created by the family and friends of Janet B. Chiang. An award is made annually to a student who has demonstrated strong leadership qualities and a strong interest in his or her Asian cultural heritage.

Emma A. Sheaffer Drama Scholarships. These scholarships are awarded to talented prospective drama students who would not be able to attend Duke University without financial assistance. Awards shall be made to a single individual or to several qualified students in need, with first preference to students from the New York metropolitan area. Awards range from \$1,000 to \$5,000. Interested incoming students should apply to the director of the program.

The Steven and Toby Korman Drama Scholarships. The scholarship shall be awarded annually to a student(s) who has demonstrated exceptional talent and ability in the field. Awards range from \$1,000 to \$5,000. Interested students should apply to the director of the program.

Kohler Scholarships in Drama. Several awards each year ranging from \$250 to \$1,000 are given to students active in the Drama Program. Awards are made on a nondiscriminatory basis with regard to color, sex, and religion. Interested students should apply to the director of the program.

The Beth Gotham Semans Drama Scholarships. These awards are made annually to currently enrolled undergraduate students who have been and continue to be active in drama, with preference given to African American and other minority students. Applicants need not be drama majors but must demonstrate significant involvement in dramatic activities. Awards range from \$1,000 to \$2,500; decisions are made by a special committee appointed by the Drama Program.

Dasha Epstein Scholarship in Playwriting. This scholarship is awarded to students interested in playwriting. The recipient of this award is chosen by a faculty committee from among applicants to Duke who qualify for financial aid.

The Roger Alan Opel Memorial Scholarship. A grant is awarded annually to a Duke student who will spend a year of undergraduate study at a British university. The student is selected on the basis of intellectual curiosity, academic ability, and financial need. The award was established by the parents of Roger Alan Opel, a senior at Duke University who was killed in November, 1971.

Alumni Endowed Scholarships. Three \$8,000 per year Alumni Endowed Undergraduate Scholarships are awarded to needy students who demonstrate superior academic ability and leadership potential. These awards are renewable annually for those meeting the stated requirements. Although not restrictive, preference is given to children of alumni.

Scholarships for North Carolina Residents

The Benjamin N. Duke Scholarship Fund. Established by the Duke Endowment to honor Benjamin N. Duke, this fund is intended to encourage the enrollment of students from North Carolina and South Carolina.

The Benjamin N. Duke Leadership Award. As part of the Benjamin N. Duke Scholarship Fund, these awards recognize and encourage leadership potential and community involvement of students from North and South Carolina. Ten scholarships, valued at 75 percent of tuition, are awarded annually.

The Benjamin N. Duke Scholarship Fund also provides a number of grants which replace up to \$2,000 of what would normally be the loan portion of need-based awards received by students from North Carolina and South Carolina. This fund can allow need-based aid recipients from the Carolinas to graduate with a significantly reduced debt following the eight standard semesters of enrollment.

Trinity Scholarships. Awarded to North Carolinians of exceptional ability, these scholarships are named to honor the fact that Duke University was originally named Trinity College. Trinity scholarships provide each winner an award equal to the value of tuition, fees, room, board, and the cost of a summer program.

North Carolina Math Contest. Upon enrolling at Duke, the top student finishing in the top ten in the North Carolina Math Contest taken as a high school senior is eligible to receive a scholarship equal to the amount of tuition. This scholarship is available for each of the four years of undergraduate enrollment as long as the student maintains the specified average. Winners must have applied to and been accepted by Duke University.

The Perry Family Scholarship. Awarded to students from Winston-Salem and the Forsyth County area, this scholarship, valued at \$5,000, is awarded every other year. Recipients of the scholarship will be required to demonstrate high academic achievement as well as leadership and/or involvement in extracurricular activities. The scholarship is available for four years if the student meets the specified academic requirements.

J. Welch Harriss Scholarships. Recipients of these scholarships will receive \$1,000 per year without reference to need. If demonstrated need exceeds \$1,000, then the scholarship will be adjusted accordingly. These awards are made to entering freshmen who have achieved outstanding academic records. They are renewable each year as long as the student maintains the required average. Consideration will be given in the following order: (1) students from High Point, North Carolina; (2) students from Guilford County, North Carolina; and (3) students from North Carolina.

Alyse Smith Cooper Scholarships. Each year scholarships of various amounts are awarded to students demonstrating both merit and need. Preference is given to students from Alamance County, North Carolina.

Braxton Craven Endowed Scholarships. Recipients of these scholarships will receive an amount equal to the current tuition at Duke. Braxton Craven scholars will be chosen on the basis of outstanding academic and extracurricular achievement and need. First preference is given to students from North Carolina. The scholarships are approved on a continuing basis, provided that the recipient complies with the specified academic requirements.

The John M. and Sally V. Blalock Beard Scholarship. These scholarships are awarded annually to outstanding students from the Wake County area of North Carolina who major in English or the history of the United States. These awards are based on financial need, scholarship, character, and academic achievement.

North Carolina Legislative Tuition Grant. The North Carolina General Assembly has established a program of tuition grants available to North Carolina residents who are full-time students at private colleges and universities in the state of North Carolina. The grant for each eligible student is approximately \$1,250 per year. Applications will be mailed to all eligible students during the summer. In the case of a need-based financial aid recipient, this grant reduces a student's tuition and therefore his budget. All qualified need-based aid recipients are required to apply for this grant.

State Contractual Scholarships for Needy North Carolinians. Funds provided by the state of North Carolina through the Legislative Grant Program are distributed to needy North Carolinians qualifying for the State Contractual Scholarship Program. Application is made through the College Scholarship Service's PROFILE.

Loans. The loan programs which are available to students through Duke University are listed below:

Federal Perkins Loan. Loan funds supplied by the federal government and Duke University through Part E of Title IV of the Higher Education Act of 1965 are available to qualified students. Repayment of loans under this act normally begins nine months after the student has graduated or leaves college, with complete payment scheduled within a ten-year period. Interest accrues at the rate of 5 percent annually, commencing nine months after the borrower ceases to be at least a half-time student at an institution of higher education. This loan is part of the student's financial aid award.

Federal Stafford Student Loan Program. Loans under the Federal Stafford Student Loan program are available from banks or other incorporated state lending agencies. Duke University can arrange an alternate lender for students who are unable to obtain these loans through their home state agencies or local banks. Need as established by the federal government's formula will be considered in the university's decision regarding applications. The annual limit on a loan, which has a variable interest rate that is capped at 8.25 percent, is \$2,625 for freshmen, \$3,500 for sophomores, and \$5,500 for juniors and seniors. Repayment begins six months after the student leaves school.

Students may apply for Stafford loan funds by submitting a loan application directly to the Financial Aid Office. In addition, loan applicants must submit the Free Application for Federal Student Aid to the federal processor. Additional information about this loan program may be obtained from the Undergraduate Financial Aid Office.

Federal Parents' Loan for Undergraduate Students Program. Parents may borrow up to the cost of education less financial aid through the Federal Parent Loan for Undergraduate Students (PLUS) program. Repayment of these loans begins sixty days after loan disbursement. Interest is based upon treasury bill rates but will be no higher than 9 percent and begins to accrue at the point repayment begins. Interested parents should contact their home state lending agency or the financial aid office.

Federal Unsubsidized Stafford Loan Program. All undergraduate students, regardless of need, are eligible to borrow an Unsubsidized Stafford Loan. The loan limits and the interest rate are the same as for the subsidized Stafford Loan described above. Although repayment of the principal begins six months after the student leaves school, interest payments begin 45 days after the first disbursement of the loan.

Share Loans. "Share" is a supplemental educational loan program developed specifically to help families meet the costs of higher education. Credit-worthy families, regardless of income, may be eligible to borrow through this program. Annual loan amounts range from \$2,000 to up to the cost of education less financial aid. The interest rate is variable, and Share offers several repayment options. For information call 1-800-EDU-LOAN.

Children of Methodist Ministers. Children of ministers in the North Carolina and the Western North Carolina Annual Conferences of the United Methodist Church may be eligible to receive a partial tuition grant of \$750 per semester for a maximum of eight semesters of undergraduate study at Duke University. Eligibility is met by the parent being in a regular pastoral appointment and resident in one of the conferences. When the parent is in a special appointment and resident in one of the conferences, eligibility will be determined on an individual basis, depending upon the nature of the appointment. In all cases the decision of the university will be final.

Employment. Most financial aid recipients are offered a job as part of their aid package. These jobs require between ten and fifteen hours a week and provide an average stipend of \$1,700. The money is paid directly to the student. The Office of Undergraduate Financial Aid maintains part-time employment listings for the campus and Durham area. All students interested in working during the school year should review the jobs listing in the career counseling section of the Duke Home Page (www.duke.edu). Every effort will be made to help students find jobs consistent with their interests.

Duke University also expects that students receiving financial aid will work during the summer. In the year before entering college, a freshman should save a minimum of \$1,700 for use during the first year of college. In subsequent years, minimum student earnings will be \$2,000 for sophomores, \$2,100 for juniors, and \$2,200 for seniors. These figures are viewed as estimates and are revised consistent with actual earnings.

Duke University offers subsidized employment opportunities to many students not qualifying for need-based financial aid. Interested students should submit the appropriate aid applications.

Financial Plans. There are three plans available to assist parents and students in fulfilling financial obligations. More information about each described can be obtained from the Office of Undergraduate Financial Aid.

Tuition Plans. Many families finance a college education with the assistance of an insured tuition payment plan regardless of whether they receive financial assistance from Duke. The university is pleased to offer a twelve-month payment plan through Tuition Management Systems.

Loan Plans. Duke is pleased to offer the Duke Achiever Loan through Richard Knight. This plan offers three loan and payment options to families, including the ability to borrow the entire cost of enrollment for four years at Duke.

Of additional assistance is the SHARE Loan Program. Using this program, parents may borrow between \$2,000 and the cost of education less financial aid annually to meet their children's costs of education. Repayment may be made over twenty years.

Courses and Academic Programs



Definition of Terms

Courses taught in 1995-96 or in 1996-97 or scheduled for 1997-98 are included in this chapter with full descriptions. Additional courses, which were offered prior to 1995-96 and are likely to be taught in the future, are listed separately by number and title only under the heading *Courses Currently Unscheduled*. For courses which will be offered in 1997-98, consult the *Official Schedule of Courses*.

Introductory level courses are numbered below 100; advanced level courses are numbered 100 and above. Courses numbered 1 through 49 are primarily for first-year students; courses numbered from 200 through 299 are primarily for seniors and graduate students. (See the section on course load and eligibility in the chapter "Academic Procedures and Information.")

Double numbers separated by a hyphen indicate that credit is contingent upon completion of both courses. Double numbers separated by a comma indicate that although the course is a year-long course, credit may be received for either course or both courses.

The following symbols, suffixed to course numbers, identify small classes: *S*, seminar; *P*, preceptorial; *T*, tutorial; *D*, discussion section (for a larger class). The *L* suffix indicates that the course includes laboratory experience. *C-L*: denotes a course that is cross-listed or a program under which a course is listed.

The following symbols, suffixed to course titles, identify the area of knowledge to which a particular course has been assigned in the curriculum: *AL*, arts and literatures; *CZ*, civilizations; *FL*, foreign languages; *NS*, natural sciences; *QR*, quantitative reasoning; *SS*, social sciences.

The following portion of this bulletin, arranged alphabetically, includes courses of academic departments, programs, sections, and institutes, as well as categories of courses. Details are provided in the individual entries, which indicate whether a major, a minor, and/or a certificate is available in that particular field. (A certificate, offered in some programs, is not a substitute for a major but is a supplement, confirming that a student has satisfied the requirements of that program.)

Trinity College of Arts and Sciences

Professor Chafe, *Dean of Trinity College and Dean of the Faculty of Arts and Sciences*; Professor Thompson, *Dean of Undergraduate Affairs*; Senior Associate Dean for Administration Wilson (Social Sciences); Associate Deans Bryant (Social Sciences), Nijhout (Natural Sciences), Willard (Academic Planning and Special Projects), and Wittig (Humanities); Assistant Deans Gilbert (Summer Sessions), Johns (Study Abroad), Keul (Pre-Majors), Lattimore (Social Sciences), and Singer (Natural Sciences)

Aerospace Studies—Air Force ROTC (AS)

Professor Spitzer, Colonel, USAF, *Chair*; Visiting Assistant Professor Runyon, Captain, USAF, *Director of Undergraduate Studies*; Visiting Assistant Professors Sims, Major, USAF, and Evans, Lieutenant, USAF

Eligibility Requirements. All freshmen and sophomores, men and women, are eligible to enroll in the General Military Course in the Air Force Reserve Officer Training Corps. For enrollment in the Professional Officer Course, the student must have completed successfully either the General Military Course and a four-week field training encampment or the six-week field training encampment; must execute a written agreement with the government to complete the Professional Officer Course; must be sworn into the enlisted reserve; and must agree to accept a commission in the U.S. Air Force Reserve upon graduation. In addition, each student must take at least one course in mathematical reasoning and English composition prior to graduation/commissioning. Students in the General Military Course and Professional Officer Course also will be required to attend one hour of leadership laboratory each week. All courses, except 2L, are open to all other students with consent of instructor.

General Military Courses

First Year

1. The Air Force Today. Introduction to the United States Air Force and Air Force ROTC. Topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills. Laboratory required for AFROTC cadets. (May not be counted to satisfy graduation requirements.) Half course. *Evans*

2L. Leadership Laboratory. Instruction in drill and ceremonies, wearing the uniform, giving commands, and other leadership activities. Mandatory for all Air Force ROTC cadets. Must be repeated each semester. Pass/fail grading only. No credit. *Staff*

Second Year

51. The Air Force Way. A survey course designed to facilitate the transition from Air Force ROTC cadet to candidate. Topics include: Air Force heritage, Air Force leaders, Quality Air Force, an introduction to leadership, group leadership problems, and continuing application of communication skills. Laboratory required for AFROTC cadets. (May not be counted to satisfy graduation requirements.) Half course. *Runyon*

Professional Officer Courses

All students selected to continue aerospace studies pursue the following courses:

Third Year

105S, 106S. Air Force Leadership and Management. Leadership and quality management fundamentals, professional knowledge, Air Force doctrine, leadership ethics, and communication skills required of an Air Force junior officer. 105S: training philosophy, counseling/feedback, leadership vs. management, leadership principles and perspectives, effective delegation, and written and verbal communication skills. 106S: principle centered/situational leadership, case studies of different leadership styles, ethical behavior, effective management tools to evaluate and improve processes, building and refining written and verbal communication skills from 105S. Laboratory required for AFROTC cadets. One course each. *Sims*

Fourth Year

205S, 206S. Preparation for Active Duty. The national security process, regional studies, advanced leadership ethics, and Air Force doctrine. The military as a profession for

active duty, and current issues affecting military professionalism. 205S: American tradition in foreign politics; cold war challenges; the relationship with the president, Congress, and the military; chain of command; Air Force and joint doctrines; national security issues; regional studies; and advanced level briefings and papers. 206S: officership, ethics, military law, Air Force issues, roles and missions, preparation for active duty, and building and refining written and verbal skills from 205S. Laboratory required for AFROTC cadets. One course each. *Spitzer*

COURSES CURRENTLY UNSCHEDULED

49S. First-Year Seminar

African and African-American Studies (AAS)

Professor Holloway, *Director*; Professor McLoyd; Research Professor Giddings; Associate Professor Lubiano; Assistant Professor of the Practice El Hamel; Lecturer Daniels

A major or a minor is available in this program.

The program in African and African-American Studies provides students with an interdisciplinary approach to the field, within which they may focus on Africa or the Americas. The courses are essential components of a liberal arts education. Ten courses (including a prerequisite course entitled Introduction to African and African-American Studies) are required for the major; five are required for the minor. A summer study program is available in Zimbabwe/Botswana sponsored by the Department of Political Science.

The African and African-American Studies courses are listed below. (Full descriptions of cross-listed courses may be found in the bulletin course listings of the particular department or program cited in the cross-listing, for example, Music 74.) In addition, Swahili and Arabic language courses are taught in the Asian and African Languages and Literature Program, and other relevant language courses in the Department of Romance Studies.

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

51. Introduction to African and African-American Studies. (CZ) A general interdisciplinary study providing a broad overview of: African origins and culture, the slave trade both in Africa and the Americas, the antebellum period in the Americas, the struggle for freedom by black people, and the post-1865 period. One course. *Staff*

70, 71. The Third World and the West. (CZ) See C-L: History 75, 76; also C-L: Comparative Area Studies. One course each. *Staff*

74. Introduction to Jazz. (AL) See C-L: Music 74. One course. *Jeffrey*

99. Special Topics. Topics vary from semester to semester. One course. *Staff*

99S. Special Topics. Seminar version of African and African-American Studies 99. One course. *Staff*

100. Duke Summer Program: Zimbabwe/Botswana. (SS) See C-L: Political Science 100C; also C-L: Comparative Area Studies. Variable credit.

113B. Europe's Colonial Encounter, 1492-1992. (CZ) See C-L: History 113B. One course. *Thorne*

114S. Islam in West Africa. (CZ) The development of Islam with reference to its theological and intellectual aspects in West Africa, beginning with West Africa's first contacts with Islam in the seventh-century Islamic reform movements. The history of kingdoms and empires of West Africa. Focus on the impact of Islam there. One course. *El Hamel*

115A. History of Africa: From Antiquity to Early Modern Times. (CZ) Not open to students who have taken the former African and Afro-American Studies 115. See C-L: History 115A; also C-L: Comparative Area Studies and Women's Studies. One course. *El Hamel or Ewald*

115B. History of Africa: From Early Modern Times to Independence. (CZ) Not open to students who have taken the former African and Afro-American Studies 115. See C-L: History 115B; also C-L: Comparative Area Studies and Women's Studies. One course. *El Hamel or Ewald*

116. Race and Ethnic Relations. (SS) See C-L: Sociology 116. One course. *Jackson*

117. Black Women and the Civil Rights Movement. (SS) An interdisciplinary examination of the role of African-American women in the modern civil rights movement, including an overview of the movement and its impact on the current political landscape; individual women who were agents of change; and the intersections of race, gender, and class that emerged during this important period of this reform. One course. *Giddings*

121. Introduction to Asian and African Literature. (AL) See C-L: Asian and African Languages and Literature 121; also C-L: Comparative Area Studies. One course. *Staff*

122. Culture and Politics in Africa. (CZ) See C-L: Cultural Anthropology 122; also C-L: Comparative Area Studies. One course. *Piot*

123. Modernity, Ethnicity, and Colonization. (AL, CZ) See C-L: Romance Studies 124; also C-L: Canadian Studies, Comparative Area Studies, and Cultural Anthropology 130. One course. *Mignolo or staff*

124S. Slave Society in Colonial Anglo-America: The West Indies, South Carolina, and Virginia. (CZ) See C-L: History 124S; also C-L: Comparative Area Studies. One course. *Gaspar*

127A. The Caribbean, 1492-1700. (CZ) See C-L: History 127A. One course. *Gaspar*

127B. The Caribbean in the Eighteenth Century. (CZ) Not open to students who have taken African and Afro-American Studies 127. See C-L: History 127B. One course. *Gaspar*

133. History of African-American Social Dance Forms of the Twentieth Century. (AL) See C-L: Dance 133. One course. *Sommer*

135S. Diaspora Literacy: Black Women Novelists of the Third World. (AL) Contemporary fiction of black women writers from West Africa, the Caribbean, and the United States. Representations of cultural and national identities, patterns of language, figurative representations, and the revisioned histories as structured and framed within imaginative literatures. Issues of colonialism and slavery as background. One course. *Holloway*

141S. Special Topics in Jazz. (AL) Also taught as Music 141S. Prerequisite: Music 74 or consent of instructor. One course. *Brothers or Jeffrey*

142. African-American Music in the Twentieth Century. (AL) See C-L: Music 142. One course. *Brothers*

145A, 145B. African-American History. (CZ) See C-L: History 145A, 145B. One course each. *Gavins*

148. Urban Poverty and the Urban Underclass (A). (SS) See C-L: Political Science 103B. One course. *Orr*

149. Introduction to African-American Politics. (SS) See C-L: Political Science 141. One course. *Orr*

151. Islamic Mysticism: Arabic (Western) Tradition. (CZ) See C-L: Religion 152A; also C-L: Comparative Area Studies. One course. *Cornell*

- 152. African-American Religion and Identity. (CZ)** See C-L: Religion 154. One course.
Hart
- 153. From the African Kraal to the African-American Church. (CZ)** See C-L: Religion 153. One course. *Hart*
- 154. Art and Philosophy from West Africa to the Black Americas. (AL)** Not open to students who have taken Art 174. See C-L: Art History 174; also C-L: Comparative Area Studies. One course. *Powell*
- 156. The Blues Aesthetic: African-American Art in the Twentieth Century. (AL)** Not open to students who have taken Art 176. See C-L: Art History 176. One course. *Powell*
- 158A. New Perspectives on the Atlantic World. (CZ)** See C-L: History 158A. One course.
Ewald
- 160. Women in Islam: Fact and Fiction. (CZ)** See C-L: Asian and African Languages and Literature 190; also C-L: Comparative Area Studies, Religion 139, and Women's Studies. One course. *Cooke*
- 161S. Economics of Slavery in the American South. (SS)** Prerequisite: Economics 149. See C-L: Economics 161S; also C-L: History 140S. One course. *Staff*
- 165. History of the Working Class in the United States. (CZ)** Not open to students who have taken History 106. See C-L: History 165. One course. *Keyssar*
- 168S. The Atlantic Slave Trade. (CZ)** See C-L: History 168S; also C-L: Comparative Area Studies. One course. *Gaspar*
- 169S. African-American Drama. (AL)** Also taught as English 169S. One course. *Staff*
- 170. Afro-Brazilian Culture and History. (CZ)** See C-L: History 170C. One course.
French
- 171. From Apartheid to Democracy in South Africa. (SS)** See C-L: Political Science 171; also C-L: Comparative Area Studies. One course. *Johns*
- 173, 174. African-American Literature. (AL)** Not open to students who have taken the former English 167, 168. See C-L: English 164A, 164B. One course each. *Chandler, Clarke, or Holloway*
- 175S. The Southern Plantation as Historical Laboratory: Odyssey in Black and White, 1770-1970. (CZ)** See C-L: History 175S. One course. *Nathans*
- 177. North African Literature in Translation. (AL)** See C-L: Asian and African Languages and Literature 174; also C-L: Comparative Area Studies. One course. *Chergui*
- 179. History of South Africa, 1600-1960. (CZ)** See C-L: History 179; also C-L: Comparative Area Studies. One course. *Ewald*
- 181, A-E. Studies in an Individual African-American Author. (AL)** See C-L: English 165. One course. *Chandler, Clarke, Holloway, or Willis*
- 182, A-F. African-American Literary Genres. (AL)** See C-L: English 166. One course. *Chandler, Clarke, Holloway, or Willis*
- 190, 191. Independent Study.** Directed reading and research. Consent of both instructor and director of undergraduate studies required. Open to juniors and seniors. One course each. *Staff*

192, 193. Honors Program Sequence. Research for the development of honors thesis. Open only to senior majors. Consent of both instructor and director of undergraduate studies required. One course each. *Staff*

194A, 194B. Distinction Program Sequence. Research for the development of thesis. Open only to senior majors. Consent of both instructor and director of undergraduate studies. One course each. *Staff*

195S. Fugitive Slave (Maroon) Communities in New World Slave Societies. (CZ) Also taught as History 195S or 196S. C-L: Comparative Area Studies. One course. *Gaspar*

196S. Issues in the History of Tropical Africa. (SS) Also taught as History 195S or 196S. C-L: Comparative Area Studies. One course. *Ewald*

197S. The Destruction and Aftermath of Slavery in the Americas: A Comparative Perspective. (CZ) Also taught as History 195S or 196S. One course. *J. Scott*

198S. Senior Seminar. Open to seniors majoring in African and Afro-American Studies and to others with consent of instructor. One course. *Staff*

199. Special Topics. Lecture version of African and Afro-American Studies 199S. One course. *Staff*

199S. Special Topics. Topics vary from semester to semester. One course. *Staff*

200S. Seminar in Asian and African Cultural Studies. (CZ) See C-L: Asian and African Languages and Literature 200S; also C-L: Cultural Anthropology 288S and Literature 200S. One course. *Ching*

206. Origins of Afro-America. (CZ) See C-L: History 206. One course. *Staff*

209S. Race, Class, and Gender in Modern British History. (CZ) See C-L: History 209S; also C-L: Study of Sexualities. One course. *Thorne*

233S. Slave Resistance and Social Control in New World Societies. (CZ) See C-L: History 233S; also C-L: Comparative Area Studies. One course. *Gaspar*

235S. The Antebellum South. (CZ) See C-L: History 235S. One course. *S. Nathans*

241. Classical Islamic Theology and Ethics. (CZ) See C-L: Religion 241. One course. *Cornell*

254. Justice, Law, and Commerce in Islam. (CZ) See C-L: Religion 254; also C-L: Law 568. One course. *Cornell*

255. Anthropology as Public Discourse. (SS) See C-L: Cultural Anthropology 255. One course. *Baker or Strauss*

264S. Poverty and Social Policy: Life Course Human Resource Development. (SS) Also taught as Public Policy Studies 264S.46. One course. *Staff*

270S. Topics in African Art. (AL) Consent of instructor required. Not open to students who have taken Art 270S. See C-L: Art History 270S. One course. *Powell*

278S. Black Political Participation. (SS) See C-L: Political Science 278S. One course. *Orr*

279S. Race, Racism, and Democracy. (SS) See C-L: Cultural Anthropology 279S. One course. *Baker*

292S. Slavery and Freedom in Africa, to 1960. (CZ) See C-L: History 295S; also C-L: Comparative Area Studies. One course. *Ewald*

299. Special Topics. Topics vary from semester to semester. One course. *Staff*

299S. Special Topics. Seminar version of African and African-American Studies 299. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

103. North African Culture. (AL)

131S. Comparative Government and Politics: Africa. (SS)

138. Francophone Literature. (AL, FL)

157. Art, Architecture, and Masquerade in Africa. (AL)

164. History and Religions of North Africa. (CZ)

176S. The Southern Plantation as Historical Laboratory: Research Seminar. (CZ)

261. Islam in the African-American Experience. (CZ)

THE MAJOR

The major requires ten courses, eight of which must be at the level of 100 or above. Students may choose one of the two following options.

A. The Americas Focus

Prerequisite: African and African-American Studies 51.

Major Requirements:

1. Three courses focusing upon the Americas in each of the following areas:
 - a. Arts or Literature
 - b. History
 - c. Social, Religious, Economic, or Political Institutions/Processes.
2. African and African-American Studies 198S (Senior Seminar).
3. Five additional African and African-American Studies courses.

B. Africa Focus

Prerequisite: African and African-American Studies 51.

Major Requirements:

1. Three courses focusing upon Africa in each of the following areas:
 - a. Arts or Literature
 - b. History
 - c. Social, Religious, Economic, or Political Institutions/Processes.
2. African and African-American Studies 198S (Senior Seminar).
3. Five additional African and African-American Studies courses.

THE MINOR

The minor requires five courses, one of which must be African and African-American Studies 51, and four of which must be at the level of 100 or above. Courses must be selected in each of the following areas:

- a. Arts or Literature.
- b. History
- c. Social, Religious, Economic, or Political Institutions/Processes.

N.B. Both program foci (Africa and the Americas) must be represented in the four-course selection.

Honors/Distinction

The program offers work leading to graduation with distinction. See section on honors in this bulletin and contact the program director.

Foreign Languages

The program recommends that majors complete at least two years of college-level study, or equivalent, of a foreign language. Students interested in additional study of African or Diaspora cultures are strongly encouraged to study an African or Caribbean language.

Animal Behavior

For courses in animal behavior, see Biology.

Anthropology

See the Department of Biological Anthropology and Anatomy and the Department of Cultural Anthropology for information about those majors.

Arabic

For courses in Arabic, see Asian and African Languages and Literature.

Art and Art History (ARV/ARH)

Associate Professor Powell, *Chair*; Assistant Professor Rice, *Director of Undergraduate Studies*; Professors Bruzelius and Wharton; Associate Professors Pratt, Stiles, and Van Miegroet; Assistant Professors Abe and Cormack; Professor Emeritus Markman; Assistant Professors of the Practice Noland and Shatzman; Adjunct Associate Professor Reents-Budet; Adjunct Assistant Professor Schroth

Majors and minors in art history and visual arts are available in this department.

HISTORY OF ART (ARH)

Art history is the study of works of art in the context of the broader social, political, and intellectual cultures of which they are a part. Studying art history develops the ability to evaluate and organize information, visual as well as verbal; it also enhances the faculties of creative imagination, precise observation, clear expression, and critical judgment. Students of art history acquire a sophisticated understanding of the theory and practice of artistic production and reception.

A major or second major in art history provides basic training for those interested in art-historical or art teaching, museum and gallery work, art publishing, and advertising; the major also furnishes an appropriate background for graduate training in architecture. Art history's emphasis upon careful observation, the ordering of diverse sorts of information, expository writing, and scholarly research makes it a good general preparation for any profession.

20. Basic Art History. (AL) Credit for Advanced Placement on the basis of the College Board examination in art history. Does not count toward the major in art history or design. Not open to students who have taken Art 20. One course.

49S. First-Year Seminar. Topics vary each semester offered. Not open to students who have taken Art 49S. One course. *Staff*

50. Introduction to Spanish Art. (AL, FL) The history of art in Spain from prehistoric times to Picasso and other artists of the twentieth century. (Taught in Spanish in Spain.) Not open to students who have taken Art 50. One course. *Staff*

51. Art of the Baroque and Rococo. (AL, FL) Study of one of the most important monuments of European art, the baroque through its most representative painters, and the

introduction of a new art arising in France: the rococo. The history of the movement in the country of each painter as well as the different characteristics in each particular case. (Taught in Spanish in Spain.) Not open to students who have taken Art 51. One course. *Staff*

52. FOCUS Program Topics in Art History. (AL) Open only to students in the FOCUS Program. Not open to students who have taken Art 52. One course. *Staff*

55. History of Spanish Art of the Nineteenth Century: Goya and His Times. (AL, FL) Goya's life in its historical and artistic context; Goya as a painter of the aristocracy; his personal crisis; the Napoleonic invasion of 1808 and its influence on Goya; and his last stage. (Taught in Spanish in Spain.) Not open to students who have taken Art 55. One course. *Staff*

69, 70. Introduction to the History of Art. (AL) The history of western architecture, sculpture, and painting in a cultural context. 69: from prehistory to the Renaissance (c. 1400). 70: from the Renaissance to the present. Not open to students who have taken Art 69, 70. One course each. *Staff*

69D, 70D. Introduction to the History of Art. (AL) Same as Art History 69, 70 except instruction provided in two lectures and one small discussion meeting each week. Not open to students who have taken Art 69D, 70D. One course each. *Staff*

71. Introduction to Asian Art. (AL) The visual arts of Asia, primarily Chinese and Japanese sculpture, painting, and architecture: selected works in their historical context; the multiple ways in which the works have been understood in the past as well as the present. A range of art historical approaches and methods. C-L: Comparative Area Studies. One course. *Abe*

71D. Introduction to Asian Art. (AL) Same as History of Art 71 except instruction provided in two lectures and one small discussion meeting each week. C-L: Comparative Area Studies. One course. *Abe*

97. Visual Culture Outside the United States, I. (AL) Course in the visual arts and/or architecture taught in Duke programs abroad. Not open to students who have taken Art 97. One course. *Staff*

98. Visual Culture Outside the United States, II. (AL) See Art History 97. Not open to students who have taken Art 98. One course. *Staff*

114. The Aegean Bronze Age. (CZ) Not open to students who have taken Art 114. See C-L: Classical Studies 155. One course. *Younger*

115. Ancient Greece. (CZ) Not open to students who have taken Art 115. Prerequisite: Classical Studies 11S, 53, 123, or 124, or History 53, or consent of instructor. See C-L: Classical Studies 147. One course. *Younger*

116S. Athens. (CZ) Not open to students who have taken Art 116S. See C-L: Classical Studies 161S. One course. *Younger*

117. Pompeii. (CZ) Not open to students who have taken Art 117. See C-L: Classical Studies 162. One course. *Richardson*

123. Greek Art and Archaeology. (AL) Not open to students who have taken Art 123. See C-L: Classical Studies 123. One course. *Younger*

126A. Rome: History of the City. (AL, CZ) Not open to students who have taken Art 126 or Art 126A. See C-L: Classical Studies 145. One course. *Staff*

126B. Roman Architecture. (AL) Cities and major monuments of the Roman world. The architecture of Republican Italy (with reference to Hellenistic and Etruscan predecessors) and of the transition to the Empire. Public (state-sponsored) and private monuments (funer-

ary monuments, domestic architecture). Not open to students who have taken Art 126B. C-L: Classical Studies 144. One course. *Cormack*

128. Art of the Roman Empire. (AL) Art in the Roman world from Augustus to Theodosius. Emphasis on portraiture, private arts, and triumphal monuments. Not open to students who have taken Art 128 or Classical Studies 126. C-L: Classical Studies 128. One course. *Cormack*

129. The History of Prints and Printmaking. (AL) The art of printmaking from the fifteenth through the eighteenth centuries. The impact of the invention of printing; technical and artistic innovations; the contributions of individual artists from Mantegna to Tiepolo. Firsthand experience of basic printmaking techniques in the studio; study of original works of art on frequent trips to local museums and libraries. Consent of instructor required. Not open to students who have taken Art 129. C-L: Medieval and Renaissance Studies. One course. *Rice*

130. Late Antique Christian Art. (AL) Art and architecture of the Christian community from the third to the fifth century in the context of the Roman imperial state. Not open to students who have taken Art 130. C-L: Classical Studies 130 and Religion 130. One course. *Wharton*

133. Colonial Art of the Andean Region. (AL, FL) Colonial art of the Andean region and its modifications through indigenous Aymara and Quéchuá conceptions of space and decoration. Special focus on iconology and the persistence of ancient indigenous myths within Christian images, the colonization of the imaginary through rituals and festivals. The rich variety of Andean textiles and weaving techniques. (Taught in Spanish in the Duke in the Andes Program.) One course. *Staff*

134. Topics in Medieval Art and Architecture. (AL) Specific problems dealing with contextual and cultural issues in medieval art and architecture from c. 300 to 1400. Not open to students who have taken Art 134. C-L: Medieval and Renaissance Studies. One course. *Staff*

139. Aspects of Medieval Culture. (CZ) Not open to students who have taken Art 139. See C-L: Medieval and Renaissance Studies 114; also C-L: Classical Studies 139 and History 116. One course. *Rasmussen, Solterer, or Witt*

140. Topics in Renaissance Art. (AL) Specific problems dealing with the iconography, style, or an individual master from c. 1300 to 1600. Subject varies from year to year. Not open to students who have taken Art 140. C-L: Medieval and Renaissance Studies. One course. *Rice*

141. Fifteenth-Century Italian Art. (AL) Painting, sculpture, and architecture from Masaccio, Donatello, and Brunelleschi to Leonardo. Emphasis on the art of Florence. Not open to students who have taken Art 141. C-L: Medieval and Renaissance Studies. One course. *Rice*

142. Sixteenth-Century Italian Art. (AL) Painting and sculpture in Rome and Florence: Michelangelo, Raphael, Leonardo. The rise and diffusion of mannerism: Pontormo to Tintoretto. Not open to students who have taken Art 142. C-L: Medieval and Renaissance Studies. One course. *Rice*

143. The Art of the Counter Reformation. (AL) Religious art in Catholic Europe during and following the Council of Trent. Rise of the new religious orders; the revival of interest in the early Church and the origins of Christian archaeology; the cult of saints and the veneration of relics; the Church's use of art in its campaign against Protestantism; papal patronage and the monumentalization of Rome. Considers the validity of the concept of a counter-reformation style. C-L: Medieval and Renaissance Studies. One course. *Rice*

144. Renaissance and Baroque Art History. (AL) Introduction to the development of painting, sculpture, and architecture in Rome from the fifteenth to the early seventeenth centuries, focusing on the patronage of the Popes and the Papal court. Consent required. Taught at the Intercollegiate Center for Classical Studies in Rome. One course. *Staff*

145. Renaissance Art in Florence. (AL) Paintings, sculpture, and architecture from Giotto to Michelangelo based on the works of art preserved in Florence. Emphasis on individual artists and their creations and on the relation of the artists to the society of their times. (Taught in Italy.) Not open to students who have taken Art 145. C-L: Medieval and Renaissance Studies. One course. *Staff*

146. Italian Renaissance Architecture. (AL) Development of building types and city planning in the fifteenth and sixteenth centuries in central and northern Italy. Emphasis on Brunelleschi, Alberti, Bramante, Michelangelo, and Palladio. Not open to students who have taken Art 146. C-L: Medieval and Renaissance Studies. One course. *Rice*

148. Art of the Netherlands in the Fifteenth Century. (AL) Early Netherlandish painting in the Burgundian Netherlands from Hubrecht and Jan Van Eyck to Gerard David and Hieronymus Bosch. Cultural, historical, and intellectual environment in Flanders and Brabant; civic and courtly patronage in Doornik (Tournai), Ghent, Bruges, Mechlin, and Antwerp; new research strategies of contemporary evidence. Not open to students who have taken Art 148. C-L: Medieval and Renaissance Studies. One course. *Van Miegroet*

149. Aspects of Renaissance Culture. (CZ) See C-L: Medieval and Renaissance Studies 115; also C-L: History 148 and Italian 125. One course. *Rasmussen, Rice, Van Miegroet, and Witt*

150. Italian Baroque Architecture. (AL) Architecture in Italy in the seventeenth and eighteenth centuries. Emphasis on the contributions of Bernini, Borromini, Cortona, Guarini, and Juvarra. The evolution of building types, both secular and religious; town planning; garden and landscape history. Special attention to the cultural, economic, and political forces that shaped the Baroque city. Not open to students who have taken Art 150. C-L: Medieval and Renaissance Studies. One course. *Rice*

151. Art of Italy in the Seventeenth Century. (AL) Caravaggio, the Carracci, Guido Reni, Domenichino, Bernini, and Poussin. Modes of description and narration; the concern with the status of pictorial representation; and the attempts to define and retrieve the canonical achievements of the early sixteenth century. Not open to students who have taken Art 151. One course. *Rice*

152. Art of the Netherlands in the Sixteenth Century. (AL) Painting in Antwerp and the Spanish Netherlands in a period of political turbulence (Reformation, Counter-Reformation); Pieter Bruegel, Frans Floris, Hendrick Goltzius; landscape painters and the exiles at Frankenthal; Flemish painters at the court of Rudolph II in Prague; art and politics in Flanders, Brabant, and Holland. Not open to students who have taken Art 152. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Van Miegroet*

153. Art of the Northern Netherlands in the Seventeenth Century. (AL) A contextual study of northern Netherlands art, seen through the major Dutch cities and towns where painters, such as Frans Hals and Johannes Vermeer, were at work. Rembrandt and his school; Dutch art in its historical, societal, moral, and psychological context. Not open to students who have taken Art 153. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Van Miegroet*

154. German Art in the Fifteenth and Sixteenth Centuries. (AL) An examination of German art, including Stefan Lochner, Konrad Witz, Albrecht Dürer, and Hans Holbein the Younger; the significance of the Councils of Konstanz and Basel; the revolutionary impact of the printing press. New trends in sculpture, including the relatively unknown wood carvings

created in Nuremberg between 1475 and 1515. Not open to students who have taken Art 154. C-L: Comparative Area Studies, Interdisciplinary German Studies, and Medieval and Renaissance Studies. One course. *Van Miegroet*

155. Mercantile Culture and Art in the Netherlands. (CZ) The mercantile culture and its relationship with art and the occupation of artist in the Netherlands (fifteenth–seventeenth centuries). The economy of towns, the artist's social position, the place of art in the local economy, and the connections between economic well being and the emergence of art as asset. Commercial evolution: institutions (markets, banks, stock exchanges), instruments (for example, the bill of exchange), and attendant conditions (risk, speculations, panics). The peculiarities of picturing, the role of art as moveable product, liquidity and store of value. Not open to students who have taken Art 155. Prerequisites: Art History 70 and consent of instructor. C-L: Comparative Area Studies and Economics 152. One course. *De Marchi and Van Miegroet*

158-159. History of Netherlandish Art and Visual Culture in a European Context. (AL) See Art History 241-242. (Taught in the Netherlands.) Not open to students who have taken 241-242. C-L: Comparative Area Studies. Two courses. *Van Miegroet*

161. Nineteenth-Century Art, 1789-1848: Revolution to Revolution. (AL) Painting and sculpture of leading artists within the movements of neoclassicism, romanticism, and mid-century realism. Not open to students who have taken Art 161. C-L: Comparative Area Studies. One course. *Staff*

162. American Art from Colonial Times to 1900. (AL) The development of an American national school in portraiture, history painting, landscape, genre scenes, and still-life. Major figures include Copley, Bingham, Cole, Church, Whistler, and Eakins. Not open to students who have taken Art 162. One course. *Powell*

163. Twentieth-Century American Art: Identity and Nationalism. (AL) Survey of twentieth-century American art from 1900 to the present, including major stylistic and theoretical developments and movements (that is, the Harlem Renaissance, the "American Scene," and others). Special attention to artistic activities emanating from such government-sponsored programs as the Works Progress Administration's Federal Art Projects, the Farm Security Administration's Photography Units, and the National Endowment for the Arts' various programs. Not open to students who have taken Art 163. One course. *Powell*

164. Early Chinese Art. (AL) Chinese art from the earliest times to the third century C.E. Emphasis on the cultural and historical contexts of ceramics, cast-bronze vessels, sculpture, and painting. Special attention to new archaeological discoveries in China. C-L: Comparative Area Studies. One course. *Abe*

165. Introduction to Israeli Culture. (AL, CZ) See C-L: Asian and African Languages and Literature 155. One course. *Zakim*

166. Nineteenth-Century Art after 1848: Early Modernism. (AL) A survey of the second half of the nineteenth century in Europe with particular emphasis on realism, impressionism, postimpressionism, and symbolism. Not open to students who have taken Art 166. One course. *Stiles*

167. Twentieth-Century Art, 1900-1945: The Avant-garde and Modernism. (AL) Major artistic movements and theoretical aims of early modernism: fauvism, cubism, expressionism, futurism, constructivism, suprematism, dada, surrealism, deStijl, Bauhaus, and Neue Sachlichkeit. Not open to students who have taken Art 167. C-L: Comparative Area Studies and Women's Studies. One course. *Stiles*

168. Art since 1945: Modernism and Postmodernism. (AL) Major artistic movements and theory in Europe and the United States after World War II: abstract expressionism, color

field, pop art, minimal art, Arte Povera, process, conceptual, and performance art, earth-works, photo-realism, neo-expressionism, and appropriation. Not open to students who have taken Art 168. C-L: Comparative Area Studies and Women's Studies. One course. *Stiles*

169. Documentary Photography and Social Activism in the Nuclear Age. (AL) The role of photojournalism and documentary photographers in recording and communicating vital issues of the nuclear age including nuclear weapons testing and its effects, the environmental issues surrounding fallout and nuclear power-plant accidents, low-level waste disposal, and other human and environmental issues related to war, the technology of nuclear weapon and energy production and their cultural manifestations. Not open to students who have taken Art 169 or Art 177B. C-L: Comparative Area Studies. One course. *Stiles*

170. Chinese Buddhist Art. (AL) Chinese sculpture, painting, and architecture in relation to Buddhist texts, practice, and ritual from the fourth through the ninth century C.E. Introduction to precedents in Indian and Central Asian Buddhist art. Emphasis on the relationship between Buddhist and non-Buddhist imagery. Not open to students who have taken Art 170. C-L: Comparative Area Studies. One course. *Abe*

171. Chinese Painting. (AL) The art of painting in China from the earliest times to the nineteenth century C.E. Emphasis on landscape painting and collecting, issues of aesthetics, and the construction of an art history in China. Not open to students who have taken Art 171. C-L: Comparative Area Studies. One course. *Abe*

172. Topics in Asian Art. (AL) Examples of the visual arts of China and Japan organized around a single theme or genre such as painting, Buddhist art, or cinema. Not open to students who have taken Art 172. C-L: Comparative Area Studies. One course. *Abe*

174. Art and Philosophy from West Africa to the Black Americas. (AL) A survey of several major cultural groups in West Africa and their impact on the arts and religions of blacks in South America, the Caribbean, and the United States. Not open to students who have taken Art 174. C-L: African and African-American Studies 154 and Comparative Area Studies. One course. *Powell*

176. The Blues Aesthetic: African-American Art in the Twentieth Century. (AL) Art of the twentieth century, with an emphasis on works derived from an Afro-United States cultural perspective. Major figures include Aaron Douglas, Jacob Lawrence, Charles White, Elizabeth Catlett, and Romare Bearden. Not open to students who have taken Art 176. C-L: African and African-American Studies 156. One course. *Powell*

179. The History of Performance Art. (AL) Works in the visual arts in which the primary means and medium of expression is the human body in happenings, Fluxus, demonstrations, destruction art, body art, and performance since 1955. Theoretical discussion focusing on the challenge that live art poses to the traditional paradigm of the art object. Not open to students who have taken Art 179. C-L: Comparative Area Studies, Drama 179, and Women's Studies. One course. *Stiles*

183. Etruscan Art and Architecture. (AL) The art of the Etruscans, inhabitants of central Italy from the ninth through the second centuries B.C. Painting, sculpture, pottery, tomb architecture, domestic architecture, and portraiture. Theories of Etruscan origins; particular emphasis on Etruria's contacts with other cultures (Greek, Roman, Anatolian) and the effects of these contacts on Etruscan artistic productions. Not open to students who have taken Art 183. C-L: Classical Studies 183. One course. *Cormack*

184. History of Impressionism. (AL) The evolution of the impressionist movement and postimpressionist reactions of the 1880s. Particular attention to the work of Manet, Degas, Monet, Renoir, and Pissarro. Not open to students who have taken Art 184. C-L: Comparative Area Studies. One course. *Staff*

187. Surrealism. (AL) The origins, aims, literature, and politics of the international movement of surrealism, which flourished between the world wars, examined in the context of surrealist theory. The psychoanalytic and metaphysical sources of surrealist poetry and visual representations as reflecting a utopian ideology of liberation. Not open to students who have taken Art 187. C-L: Comparative Area Studies and Women's Studies. One course. *Stiles*

188. Twentieth-Century Modernist and Postmodernist Criticism. (AL) A survey of the writings of artists, critics, and art historians from the late nineteenth century to the present, concentrating on major critical debates and on the interplay of various methodologies including formalist, iconographic, Marxist, feminist, psychoanalytic, structuralist, and post-structuralist in the interpretation of twentieth-century art. Not open to students who have taken Art 188. One course. *Stiles*

189. Modern and Postmodern Architecture. (AL) The history of architecture from nineteenth-century Beaux-Arts classicism through art nouveau and the modern movement to postmodernism. Political and ideological as well as the formal and technical aspects of building investigated through primary texts. Not open to students who have taken Art 189. One course. *Wharton*

190. Berlin: Architecture and the City, 1871-1990. (AL, CZ) Development of urban Berlin from the *Grunderzeit* (the Boom Years) of the 1870s to the present: architecture of Imperial Berlin; the Weimar and Nazi periods; post World War II; reconstruction as a reunified city. The major architectural movements from late historicism to postmodernism. (Taught only in the Duke-in-Berlin Program.) One course. *Neckenig*

191, 192. Independent Study. Directed reading and research. Open only to qualified students in the junior year, by consent of director of undergraduate studies. Not open to students who have taken Art 191, 192. One course each. *Staff*

195. Pre-Columbian Art and Culture of Andean South America. (AL) The art of Peru, Bolivia, Ecuador, and Colombia from the beginnings of permanent settlements through the coming of the Spaniards (1534 A.D.), concentrating on sociopolitical and religious institutions. Not open to students who have taken Art 195. C-L: Comparative Area Studies. One course. *Reents-Budet*

For Seniors and Graduates

201S. Topics in Greek Art. (AL) Specific aspects of the art or architecture in the Greek world from the late Geometric to the Hellenistic periods. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 201S. C-L: Classical Studies 220S. One course. *Cormack*

202S. Topics in Roman Art. (AL) Selected topics in the art and architecture of late republican and imperial Rome. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 202S. C-L: Classical Studies 227S. One course. *Cormack*

227S. Roman Painting. (AL) Not open to students who have taken Art 227S. See C-L: Classical Studies 236S. One course. *Richardson*

233S. Topics in Early Christian and Byzantine Art. (AL) Specific conceptual, institutional, or formal problems in the art of the late antique world or of the east Roman Empire. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 233S. C-L: Classical Studies 230S, Medieval and Renaissance Studies, and Religion 275S. One course. *Wharton*

236S. Topics in Romanesque and Gothic Art and Architecture. (AL) Analysis of an individual topic. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 236S. C-L: Medieval and Renaissance Studies. One course. *Bruzeliuss*

237S. Greek Painting. (AL) Not open to students who have taken Art 237S. See C-L: Classical Studies 232S. One course. *Stanley*

238S. Greek Sculpture. (AL) Not open to students who have taken Art 238S. See C-L: Classical Studies 231S. One course. *Younger*

241-242. History of Netherlandish Art and Visual Culture in a European Context. (AL) A contextual study of visual culture in the Greater Netherlands and its underlying historical and socioeconomic assumptions from the late medieval to early modern period, through immediate contact with urban cultures, such as Amsterdam, Leiden, Utrecht, Brussels, Ghent, Bruges, and Antwerp. Includes daily visits to major museums, buildings, and sites; hands-on research in various collections; discussion sessions with leading scholars in the field; and a critical introduction to various research strategies. (Taught in the Netherlands.) Not open to students who have taken Art 158-159 or Art 241-242. C-L: Comparative Area Studies. Two courses. *Van Miegroet*

243S. Topics in Netherlandish and German Art. (AL) Specific problems in northern Renaissance or baroque art such as the Antwerp workshops of the sixteenth century or a critical introduction to major artists such as Van Eyck, Bosch, Dürer, and Rubens. An analytical approach to their lives, methods, atelier procedures and followers; drawings and connoisseurship problems; cultural, literary, social, and economic context; documentary and scientific research strategies. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 243S. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Van Miegroet*

247S. Topics in Italian Renaissance Art. (AL) Specific problems dealing with iconography, style, or an individual master from c. 1300 to 1600. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 247S. C-L: Medieval and Renaissance Studies. One course. *Rice*

257S. Topics in Pre-Columbian Art and Culture. (AL) Selected topics in pre-Columbian art and archaeology with an emphasis on the political and cultural context of the artifact. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 257S. C-L: Comparative Area Studies. One course. *Reents-Budet*

260S. Topics in Italian Baroque Art. (AL) Problems in Italian art and architecture from c. 1580 to c. 1750. Topics vary from year to year. Consent of instructor required. Not open to students who have taken Art 260S. C-L: Medieval and Renaissance Studies. One course. *Rice*

265S. Topics in Nineteenth-Century Art. (AL) Focus on a major artist, movement, or trend in nineteenth-century art. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 265S. One course. *Stiles*

270S. Topics in African Art. (AL) Specific problems of iconography, style, or a particular art tradition. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 270S. C-L: African and African-American Studies 270S. One course. *Powell*

271S. Topics in Art of the United States. (AL) Selected topics from colonial times to 1945, with emphasis on major cultural issues, movements, works, and/or artists. Consent of instructor required. Not open to students who have taken Art 271S. One course. *Powell or Stiles*

272S. Topics in Chinese Art. (AL) Problems and issues in a specific period or genre of Chinese art. Specific focus varies from year to year. Not open to students who have taken Art 272S. C-L: Comparative Area Studies. One course. *Abe*

274S. Topics in Japanese Art. (AL) Problems and issues in a specific period or genre of Japanese art. Specific focus varies from year to year. Consent of instructor required. C-L: Comparative Area Studies. One course. *Staff*

283S. Topics in Modern Art. (AL) Selected themes in modern art before 1945, with emphasis on major movements or masters. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 283S. C-L: Comparative Area Studies. One course. *Stiles*

291, 292. Independent Study/Special Problems in Art History. Directed reading and research. Consent of instructor required. Not open to students who have taken Art 291, 292. One course each. *Staff*

296S. Methodology of Art History. (AL) Approaches to the study and theory of art: historiography, connoisseurship, iconology, and criticism. Consent of instructor required. Not open to students who have taken Art 296S. One course. *Staff*

297S. Topics in Art since 1945. (AL) Historical and critical principles applied to present-day artists and/or movements in all media since World War II. Consent of instructor required. Not open to students who have taken Art 297S. C-L: Comparative Area Studies. One course. *Cernuschi or Stiles*

298S. Topics in Modern and Postmodern Architecture. (AL) The study of particular architects, movements, or building genres in their conceptual and political contexts. Subject varies from year to year. Consent of instructor required. Not open to students who have taken Art 298S. C-L: Comparative Area Studies. One course. *Wharton*

299S. Critical Theory. (AL) Understanding of the visual arts in terms of the theoretical developments in other disciplines (for example, literature, women's studies, Marxism, and anthropology). Focus on the writings of theory-centered art historians and critics. Consent of instructor required. Not open to students who have taken Art 299S. One course. *Cernuschi, Stiles, or Wharton*

Courses Currently Unscheduled

100. Art and Architecture of Vienna. (AL)

131. Art of the Early Middle Ages. (AL)

132. Art of the Late Middle Ages. (AL)

137. Roman and Non-Roman in Ancient Italy. (CZ)

147. Byzantine and Ottoman Art and Architecture in the City of Constantinople/Istanbul. (CZ)

156. Art of the Southern Netherlands in the Seventeenth Century. (AL)

173. Art, Architecture, and Masquerade in Africa. (AL)

175. Art and Material Culture of the Southern United States. (AL)

177. The History of Conceptual Art. (AL)

178. Pre-Columbian Art and Architecture. (AL)

186. Feminism in Twentieth-Century Art. (AL)

193. Art and Culture of Mesoamerica. (AL)

194. Maya Art and Culture. (AL)

205S. Greek Architecture. (AL)

206S. Roman Architecture. (AL)

244A, S. International Expressionism. (AL)

244B, S. International Modernism. (AL)

VISUAL ARTS (ARV)

Studio art courses offer directed experiences in the practice of the visual arts, enhancing the understanding of art both within the history of culture and as an individual human achievement. Department offerings emphasize the analysis and articulation of visual concepts and processes as they relate to a broader education in the humanities and sciences.

A major or concentration in studio art can provide the foundation for further study in various areas of the visual arts. It may prepare the student for further training as an artist, teacher, or architect, as well as in related fields such as advertising or design. Lower-level courses emphasize the fundamentals of drawing, color, and form; upper-level courses encourage the student to develop a more individual conceptual approach and style, within the context of historical precedents and traditions.

21. General Art, Studio. (AL) Credit for advanced placement on the basis of the College Board examination in Studio Art. Does not count toward the major in visual arts. One course.

53. Drawing. (AL) Introduction to the visual language of drawing, including various media and processes. Learning to construct and develop drawings done from observation, through reference to other artist's work, and with frequent individual and group critiques. Consent of instructor required. Not open to students who have taken Art 53. One course.
Staff

54. Two-Dimensional Design and Color. (AL) Experiments in form and color, with work from observation. Introduction to color theory in various media. Consent of instructor required. Not open to students who have taken Art 54. Prerequisite: Visual Arts 53. One course. *Pratt*

101. Book Illustration. (AL) Studio course examining all aspects of bookmaking, including theories of bookmaking, designing and planning, typography, computer design, illustration, and binding. Not open to students who have taken Art 101. Prerequisites: Visual Arts 53 and consent of instructor. One course. *Shatzman*

102. Figure Drawing. (AL) The human figure through different artistic media and from different visual perspectives. Not open to students who have taken Art 102. Prerequisites: Visual Arts 53 and 54, and consent of instructor based on portfolio. One course. *Staff*

105. Intermediate Drawing. (AL) Allows students to explore their artistic interests and biases through a series of self-directed projects. Both the directness and the flexibility of the medium of drawing are investigated. Not open to students who have taken Art 105, 106. Prerequisites: Visual Arts 53 and 54 and consent of instructor. One course. *Pratt*

110. Sculpture. (AL) Sculptural principles, processes, and issues introduced through lectures, readings, studio assignments, individual projects, and field trips. Consent of instructor required. Not open to students who have taken Art 56. One course. *Noland*

111. Intermediate Sculpture. (AL) Studio practice in sculpture at the intermediate level. Group and individual discussion and critique. Not open to students who have taken Art 110. Prerequisite: Visual Arts 110 or consent of instructor. One course. *Noland*

116. Photography. (AL) An emphasis on how to see with the camera and ways of thinking about photographs. Class assignments accompanied by historical and theoretical readings, lectures, class discussions, and field trips. Final projects are a self-portrait series and an individual documentary essay. Not open to students who have taken Art 165. Prerequisites: camera and consent of instructor. C-L: Film and Video. One course. *Noland*

118S. American Communities: A Photographic Approach. (SS) Consent of instructor required. Not open to students who have taken Art 118S. See C-L: Public Policy Studies 176S; also C-L: Film and Video. One course. *Harris or Sartor*

119S. Advanced Documentary Photography. (SS) Not open to students who have taken Art 119S. Prerequisite: Visual Arts 118S, Public Policy Studies 176S, or consent of instructor. See C-L: Public Policy Studies 177S. One course. *Harris*

120. Painting. (AL) Studio practice in painting with individual and group criticism and discussion of important historic or contemporary ideas. Not open to students who have taken Art 103 or 104. Prerequisites: Visual Arts 54 or equivalent and consent of instructor. One course. *Pratt*

121. Intermediate Painting. (AL) Further practice in painting, with emphasis on color and refinement of form. Prerequisites: Visual Arts 120 and consent of instructor. One course. *Pratt*

130. Printmaking: Silkscreen. (AL) Investigation of the silkscreen medium and its stencil-making processes including paper stencils, blockouts crayon, and photographic methods. Not open to students who have taken Art 107. Prerequisites: Visual Arts 53, 54 and consent of instructor. One course. *Shatzman*

131. Printmaking: Lithography. (AL) Introduction to stone lithography and its drawing and printing methods. Includes both black and white and color printing. Not open to students who have taken Art 108. Prerequisites: Visual Arts 53, 54 and consent of instructor. One course. *Shatzman*

132. Printmaking: Relief and Monotype. (AL) Relief methods of woodcut and linoleum block printing and monotype techniques. Concentration on both the technical and historical aspects of the media and its expressive potentials. Not open to students who have taken Art 109. Prerequisites: Visual Arts 53, 54 and consent of instructor. One course. *Shatzman*

133. Printmaking: Intaglio. (AL) Directed problems in the intaglio medium including etching, aquatint, drypoint, black and white and color printing methods. Not open to students who have taken Art 113. Prerequisites: Visual Arts 53, 54 and consent of instructor. One course. *Shatzman*

140. Ceramics. (AL) Studio practice in the fundamentals of ceramics, including hand-building, wheel, and throwing techniques. Also clay sculpture with emphasis on figurative and architectural forms. Group and individual criticism. Experimentation with range of surfaces and glazes. Study of both historical and contemporary ceramics. Consent of instructor required. Not open to students who have taken Art 112. One course. *Staff*

141. Architectural Ceramics. (AL) Introduction to historical and contemporary ceramic tile, posing the questions of meaning and use as architectural symbol and ornament. Selected cultural approaches; studio techniques of ceramic production; color/pattern/form considerations of tile murals. Students and instructor create a mural. Consent of instructor required. Not open to students who have taken Art 133. One course. *Staff*

145. Public Art and Private Concerns. (AL) Investigation of historical and contemporary examples of public art, its definition, purposes, and precedents. Public art seen against artistic intention and public reaction. Field trips to area installations; visits by artists and administrators in the field. Not open to students who have taken Art 111B or Art 120. One course. *Pratt*

165S. Film Animation Production. (AL) See C-L: Film and Video 102S. One course. *Burns*

For Seniors and Graduates

200S. Theory of Design. (AL) Visual thinking and design innovations in historical and contemporary art. Formal analysis and discussion of important issues for students involved

in creating art. Not open to students who have taken Art 180S. Prerequisites: two courses in design and consent of instructor. One course. *Pratt*

205. Advanced Drawing. (AL) Emphasis on the development of a body of work through the adventurous exploration of the possibilities of drawing. Intensive studio work is accompanied by research into topics of interest and class presentations. Prerequisites: Visual Arts 105 and consent of instructor. One course. *Pratt*

210. Advanced Sculpture. (AL) Studio practice in sculpture at the advanced level. Group and individual discussion and critique. Not open to students who have taken Art 111 or Art 111A. Prerequisites: Visual Arts 110, and 111, or consent of instructor. One course. *Noland*

217, 218. Individual Project. (AL) Independent work open to highly qualified juniors and seniors on recommendation of instructor and invitation of department. Not open to students who have taken Art 217, 218. One course each. *Staff*

220. Advanced Painting. (AL) Not open to students who have taken Art 203, 204. Prerequisites: Visual Arts 120, 121 and consent of instructor. One course. *Pratt*

230. Advanced Printmaking. (AL) Emphasis on the visual and conceptual development through experimentation and practice in printmaking in the student's medium of choice. Not open to students who have taken Art 207, 208. Prerequisites: Visual Arts 53, 54, 130, 131, 133, and consent of instructor. One course. *Shatzman*

See also Institute of the Arts in this bulletin.

THE MAJOR

The student will elect a sequence of courses emphasizing either the history of art or visual art.

History of Art

Major Requirements. The major in art history requires at least ten courses, at least eight of which are at or above the 100 level. Both Art 69 and 70 are required. The other eight courses should be distributed across the fields of ancient, medieval, Renaissance/baroque, modern, and non-Western (pre-Columbian, African, Oriental). Students must, in any case, take at least one course in each of these five areas. No fewer than one of these ten courses must also be a 200-level seminar. Two years of college-level study or the equivalent in French, German, or Italian are strongly recommended. Majors contemplating graduate work in the history of art are advised to take more than ten courses in the history of art and to gain competence in French and German. It is suggested that students who are interested in preparing for graduate work in architecture supplement their major requirements in the history of art and architecture with the following courses: Mathematics 31, 32 and either Mathematics 103 or Physics 51L, 52L; Visual Arts 53 and either Visual Arts 54 or 56; Institute of the Arts/Biology 45S; Engineering 75L or 83L.

Visual Arts

Major Requirements. The major in visual arts requires at least ten courses. These include: two lower level courses (Visual Arts 53 and 54); eight 100-level courses including two upper-level art history courses; and Visual Arts 110. The remaining five courses must include a minimum of one course in each of the primary areas of instruction: painting, printmaking, and sculpture. Students are encouraged to enroll in an independent study and, during the spring of their senior year, in Visual Arts 200S.

COMBINED MAJOR IN ART HISTORY/VISUAL ARTS

A combined major in art history and visual arts requires at least fourteen courses. These include: two lower-level courses (Visual Arts 53 and Art History 69 or 70); and twelve upper-level courses (i.e., at or above the 100 level). The twelve upper-level courses are to be divided as follows:

Art History: Six upper-level courses distributed across the fields of ancient, Renaissance/baroque, modern, and non-western (pre-Columbian, African, Asian). Students must take at least one course in four of these five areas. At least one of these courses must also be a 200-level seminar.

Visual Arts: Six 100-level courses including a minimum of one course in each of the primary areas of instruction: painting, printmaking, and sculpture. Seniors are encouraged to enroll in an independent study and, during the spring of that year, in Visual Arts 200S.

HONORS/DISTINCTION

The department offers work leading to graduation with distinction. See the section on honors in this bulletin.

THE MINOR

Art History

Requirements: Five courses in art history at the 100 level or above.

Visual Arts

Requirements: Five courses in visual arts at the 100 level or above.

Institute of the Arts (AI)

A certificate, but not a major, is available in this program.

The Institute of the Arts administers an undergraduate certificate program in the arts, provides advisors for interdepartmental concentrations in the arts and assists students in designing individualized courses of study, offers interdisciplinary courses, sponsors artist residencies, coordinates and promotes activities in the creative and performing arts, and works to expand the role of the artist in a liberal arts setting. Courses, festivals, and events sponsored by the institute bring together faculty and students in different art forms to encourage an interdisciplinary perspective. Two separate and distinct semester-long off-campus programs, Duke in New York Arts Program (fall) and Duke in Los Angeles Program in Arts and Media (spring) provide academic and professional experiences for selected juniors and seniors. For further information about the institute, inquire in 109 Bivins Building.

DUKE IN NEW YORK ARTS PROGRAM

The institute-sponsored Duke in New York Arts Program offers an intensive, off-campus experience for juniors and seniors wishing to spend a semester studying and working in an internship situation in the fields of visual and performing arts, museum and gallery management, literary arts, and other related fields. The program has four components, each earning one credit: two seminars, Institute of the Arts 101S and 103S; an arts internship, Institute of the Arts 102; and an elective course at New York University.

DUKE IN LOS ANGELES PROGRAM IN ARTS AND MEDIA

This interdisciplinary program is sponsored jointly by the institute and the program in film and video. It offers students interested in the film, media, entertainment law, contemporary arts and music industries an intensive one-semester program in Los Angeles, based

at the University of Southern California (USC). In addition to taking one required Duke seminar on the United States Culture Industries (Literature 197S), students will enroll in an internship for credit (Institute of the Arts 105) and will take two courses at USC in either its School of Cinema-TV or its Division of General Studies.

Required Courses:

Literature 197S: Special Topics in the United States Culture Industries

Institute of the Arts 105: Arts Internship in Los Angeles

USC: two courses, one appropriate to the program and selected in consultation with the director, and one elective course.

Both of these programs are limited to juniors and seniors. Consult the institute for prerequisites required for each of these programs.

INSTITUTE OF THE ARTS (AI)

101S. Arts Resources in New York. (AL) Investigation of a central theme through attendance at selected art events in the New York area supplemented by discussions, critical papers, and reports. Visiting Duke faculty members and New York practitioners in the arts provide guest lectures and lead discussions. Open only to those admitted to the Duke in New York Arts Program. One course. *Staff*

102. Arts Internship in New York. Immersion in the professional art world through apprenticeship to a sponsoring artist or organization. Students will spend fifteen hours per week at the internship and will write a substantive paper containing significant analysis and interpretation of the relation of the students' sponsoring institution to the art form or activity as a whole, the system of production and consumption surrounding that art form or activity, and the sponsor's organizational framework, operating mechanics, and role in the creation, preservation, or interpretation of that art form or activity. Offered only on the pass/fail basis and open only to students admitted to the Duke in New York Arts Program. One course. *Staff*

103S. Arts Production, Promotion, and Presentation in New York. Analysis and investigation of the processes by which representative arts events and endeavors in New York are conceived, developed, produced, promoted, performed, and evaluated. Guest lectures by practitioners in these processes. Open only to students admitted to the Duke in New York Arts Program. One course. *Staff*

105. Arts Internship in Los Angeles. Immersion in the for-profit and not-for-profit art and entertainment worlds through apprenticeship to a sponsoring artist, scholar, or institution selected to match each student's area of interest. Each student required to complete a substantive paper containing significant analysis and interpretation that considers the relationship between the student's sponsoring institution and the larger industrial/cultural complex within the local (Los Angeles) and national economies of art, culture, and commerce. Simultaneous enrollment in Literature 160S required. Offered only on a pass/fail basis and open only to students admitted to the Duke in Los Angeles Program. One course. *Staff*

150. Managing the Arts. Various aspects of planning, organization, promotion, resource development, and general operations of such typical arts organizations as arts councils, museums and galleries, subscription series, orchestras, and dance and theatre companies. Private, public, and governmental support for the arts. Not open to freshmen. One course. *Silbiger*

151S. Art and Its Making. (AL) An inquiry into artistic process from a conceptual survey of dominant views to direct interviewing of and discussion with artists. Not open to freshmen. One course. *Rosenthal*

180, 181. Special Topics. (AL) Subjects associated with visiting artists-in-residence in the institute. Discussions and lectures conducted by guest artists on aspects of their work, views

of the arts, associations with other disciplines. Previous topics have included "George Balanchine and Contemporary Ballet" and "Aspects of Broadway Bound." Topics announced each semester. Half course, one course, respectively. Variable credit. *Staff*

191, 192. Independent Study. Directed reading and research. Consent of instructor required. One course each. *Staff*

COURSES CURRENTLY UNSCHEDULED

122. The Arts in Contemporary Culture. (AL)

130. Inter-Arts: Theory and Practice. (AL)

ARTIST-IN-RESIDENCE PROGRAM

The Nancy Hanks Artist Residency Program brings distinguished artists to Duke to interact with students, faculty, and the community at large, in settings as diverse as formal courses, class visits, performances and exhibitions, informal workshops and seminars, and off-campus programs. Courses by Nancy Hanks Resident Artists and by other visiting artists in the institute may not be listed in the bulletin since they vary from year to year. Consult the current course schedule and the institute for information about courses by artists in residence.

Asian and African Languages and Literature (AAL)

Professor Cooke, *Director*; Associate Professor of the Practice Khanna, *Director of Undergraduate Studies*; Associate Professor Wang; Assistant Professors Ching, Yoda, and Zakim; Assistant Professors of the Practice Cornell, Endo, and Lee; Lecturers Son-Yarbrough and Yao; Instructors Shah and Yanagida. *Affiliated faculty*: Professors Lawrence (religion) and O'Barr (cultural anthropology)

A major or a minor is available in this program.

Asian and African Languages and Literature provides instruction in several languages and literatures of Asia and Africa. Languages offered are Arabic, Chinese, Hebrew, Hindi, Japanese, Korean, Persian, and Swahili. The program offers Arabic, Chinese, Hebrew, Hindi, Japanese, and Korean literature courses, many in translation.

ASIAN AND AFRICAN LANGUAGES AND LITERATURE (AAL)

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

72. War, Gender, and Postcoloniality. (AL) Covers selected wars in the twentieth century by examining the intersections between the experience of war and the ways in which men and women represent themselves. Focus on World Wars I and II, Vietnam, the Algerian Revolution, the Lebanese Civil War, and the Gulf War. One course. *Cooke*

121. Introduction to Asian and African Literature. (AL) An exploration of the ways in which different societies in Asia and Africa encourage particular constructions of self, sexuality, and purposeful life in literature and film. C-L: African and African-American Studies 121 and Comparative Area Studies. One course. *Staff*

137. Contemporary Culture in South Asia. (AL, CZ) Everyday life in Indian cities and villages as represented in popular and intellectual media. Perspectives on cinema, television, and radio along with more traditional media. The fiction of Mohan Rakesh, the poetry of Muktibodh, the cinema of Aravindan and Satyajit Ray, the great Indian epics on Indian television. Taught in English. C-L: Comparative Area Studies. One course. *Khanna*

138. The Media in Modern India. (CZ, SS) The influence of modern media on Indian society. Topics include: traditional sources of new knowledge; the role of print media during

colonization and in the postcolonial period; the emergence of radio; contemporary use of film and television. (Taught in summer program in Bombay.) One course. *Khanna*

141S. The Fantastic in Chinese Fiction in Translation. (AL) A survey of Chinese narrative convention with special emphasis on the genre of the fantastic in premodern fiction. Topics include the influence of Chinese literary conventions and religious modes on the fantastic in tales and full-length novels. C-L: Comparative Area Studies. One course. *Wang*

148S. Literature and Revolution: From the May Fourth to the Post-Mao Era. (AL) The cultural politics of Chinese writer-intellectuals from the May Fourth period, through Mao Zedong's Yen'an era, up to the 1980s. Chiefly modern and contemporary narrative fiction and films. C-L: Comparative Area Studies. One course. *Wang*

149. Women and Modernity: Gender Issues in Twentieth-Century Chinese Literature and Film. (AL) Portrayals of women against the constantly changing backdrop of modern Chinese history. Gender issues raised from the May Fourth period of the 1920s through the post-Mao era and beyond to contemporary Hong Kong and Taiwan. No knowledge of Chinese language required. C-L: Comparative Area Studies and Women's Studies. One course. *Torgeson*

150S. Chinese Modernism in Post-Mao Era. (AL, CZ) Mainland Chinese aesthetic modernity in the 1980s and 1990s examined through the study of narrative fiction and films. Debates crucial to the understanding of post-Mao intellectual and literary history. One course. *Wang*

153. East Asia: Cultural Studies. (AL, CZ) East Asia as a historical and geographical category of knowledge emerging within the various processes of global movements (imperialism, colonialism, economic regionalism). One course. *Staff*

155. Introduction to Israeli Culture. (AL, CZ) The examination of contemporary Israeli culture through art, film, architecture, and literature. Concentration on interdisciplinary critical approaches to culture; interconnections of culture and Zionist ideology in the Israeli projection of the nation. C-L: Art History 165. One course. *Zakim*

160, 161. Introduction to the Civilizations of Southern Asia. (CZ) The literary, historic, linguistic, and ethnic diversity of South Asia presented through both readings and contemporary films. Not open to students who have taken Religion 160, 161. C-L: Comparative Area Studies; Cultural Anthropology 101, 102; History 193, 194; and Religion 144, 145. One course each. *Khanna*

162. Special Topics in Japanese Culture and Literature. (AL, CZ) An examination of Japanese culture through a variety of media including literary texts, cultural representations, and films. (Different material each year; may be repeated for credit.) One course. *Ching or Yoda*

163. Korean Literature in Translation. (AL) A chronological overview from earliest times until today. Begins with a brief introduction to Korean language and history as they relate to the study of literature. Novels, essays, classics, and various other genres. C-L: Comparative Area Studies. One course. *Staff*

165S. Modern Arabic Literature in Translation. (AL) Novels and short fiction from Egypt, Lebanon, Sudan, Palestine, North Africa, and the Arabian peninsula. Issues of identity formation in postcolonial societies, gender construction, and representation of conflict. C-L: Comparative Area Studies. One course. *Staff*

167. Asian Art and Theater. (AL) See C-L: Drama 167. One course. *Ma*

170. The I Ching, or Book of Changes. (CZ) Its place in ancient Chinese religion and systematic thought; its contributions to Chinese and world culture. C-L: Comparative Area Studies. One course. *Staff*

171. Women and Creativity. (AL) Novels and short fiction from Egypt, Lebanon, Sudan, Iraq, Palestine, North Africa, and the Arabian Peninsula. Texts raising issues of identity formation in postcolonial societies, gender construction, and representation of conflict. C-L: Women's Studies. One course. *Staff*

173S. Women in Arab Literature. (AL) Comparative readings of major Arabophone and Francophone women's writings from the nineteenth century until today, including al-Saadawi, al-Shaikh, Andree Chedid, and Djebbar. Taught in English. C-L: Women's Studies. One course. *Cooke*

174. North African Literature in Translation. (AL) Postcolonial literature of North Africa, namely Morocco, Algeria, and Tunisia. Particular attention paid to the ways various writers have voiced issues of identity resulting from the conflictual co-existence of national and colonial culture. C-L: African and African-American Studies 177 and Comparative Area Studies. One course. *Chergui*

182S. The Forbidden Books: Issues of Censorship in China. (AL) Topics include the tradition of book burning in premodern China, state ideology, religious prosecution and censorship, the problem of pornography, sexuality, and the emergence of the counter-Neo-Confucianist category of *qing* ("feelings/emotions") in the sixteenth century, the Literary Inquisition of the Qing dynasty, institutionalized censorship in Mao's era, and cultural policies in post-Mao China. C-L: Comparative Area Studies. One course. *Wang*

183S. Modern Hebrew Literature in English Translation. (AL) Topics in the critical study of Hebrew literature and Israeli culture. Emphasis on developing analytical skills within a broad range of critical theories. Close readings of cultural production tied to theoretical inquiries of nationalism, marginality, ideology, each year concentrating on a particular set of theoretical issues. C-L: Judaic Studies. One course. *Zakim*

188. The Politics of Women's Liberation in the Arab World. (CZ) A multidisciplinary study combining the sexual with the political, religion with history, economics with culture, women's health with ethics. Specific characteristics, tendencies; relations with the state and political parties; interests it shares with women in the South and North. The changes in the situation of Arab women resulting from the new world order. C-L: Women's Studies. One course. *Staff*

190. Women in Islam: Fact and Fiction. (CZ) The forces influencing the lives of Muslim women from the seventh to the twentieth century. Geographical or historical focus may change. Themes to include: imperialism and resistance, family, religion, literature. C-L: African and African-American Studies 160, Comparative Area Studies, Religion 139, and Women's Studies. One course. *Cooke*

191. Independent Study. Consent of instructor and director of undergraduate studies required. One course. *Staff*

195. Women in the Middle East. (CZ) The varied forces influencing the lives of women in the Middle East from the beginnings of Islam until the present. A broad introduction to the recent history of the Middle East. C-L: Comparative Area Studies and Women's Studies. One course. *Cooke*

196S. Special Topics in Advanced Film, Video, or Audio Production. (AL) Topics will vary each semester. One course. *Staff*

197S. Studies in Asian and African Literature. Topics vary each semester. One course. *Staff*

198. Special Topics in Music and Culture. (AL, CZ) Focus will be on historical developments, important instruments and genres, and cultural contents for musical performance, preservation, and adaptation. One course. *Staff*

199. Asian and African Languages and Literature Honors Seminar. Open to seniors completing the certificate in Asian and African Languages and Literature (Arabic, Chinese, Hebrew, Hindi, Japanese, Korean, Persian, Swahili). Consent of instructor required. One course. *Staff*

200S. Seminar in Asian and African Cultural Studies. (CZ) Concentration on a theoretical problem or set of issues germane to the study of Asian and African cultures. C-L: African and African-American Studies 200S, Cultural Anthropology 288S, and Literature 200S. One course. *Ching*

252. Special Topics in Asian and African Literature. (AL) Topics vary each semester. One course. *Staff*

259. The Bestseller: Cultural Populism in the 1990s' China. (AL) The bestseller culture industry in post-Mao China. Topics include the classification of the high, low, and middle brow cultures of the bestseller, the publishing industry's response to the issues of subcultures, consumerism, and the post-Mao social imaginary, the consumption of politics, and tabooed subjects. C-L: Cultural Anthropology 263 and Literature 279. One course. *Wang*

Courses Currently Unscheduled

164. Premodern Japanese Literature. (AL)

168. Francophone Literature. (AL, FL)

172S. South Asia in Poetry. (AL)

175. Creativity, Self, and Other Cross-Cultural Perspectives. (AL)

177. South Asian Women's Literature. (AL)

203S. Gender and War. (CZ)

207S. Against Textual Hegemony: Voicing Theory from the Margins. (AL)

ARABIC (ARB)

1, 2. Elementary Arabic. (FL) Understanding, speaking, reading, and writing modern standard Arabic. Language laboratory. One course each. *Cornell*

63, 64. Intermediate Arabic. (FL) Reading, composition, and conversation in modern standard Arabic. Readings include selections from the Qur'an, contemporary literature, and the Arabic press. One course each. *Cornell*

125, 126. Advanced Arabic. (AL, FL) Readings in classical and contemporary fiction and nonfiction. Works include al-Jahiz, Ibn Arabi, Taha Husain, Ibn Battuta, Ghada al-Samman and *1001 Nights*. Prerequisite: Arabic 64 or equivalent. C-L: Comparative Area Studies. One course each. *Cooke*

137. Qur'anic Studies. (FL) Introduction to the reading, recitation, grammatical study, and exegesis of selected Qur'anic texts. Prerequisite: Arabic 63, 64 or consent of instructor. One course. *Cornell*

183, 184. Topics in Arabic. (AL, FL) Readings and other material, including films, television, and radio broadcasts. Exercises in composition. Prerequisite: Arabic 126 or consent of instructor. C-L: Comparative Area Studies. One course each. *Cooke*

191, 192. Independent Study. One course each. *Cooke or Cornell*

Courses Currently Unscheduled

100. North African Culture. (AL)

161. Natural Space and Social Life in Morocco. (CZ)

CHINESE (CHN)

1, 2. Elementary Chinese. (FL) Introduction to speaking, understanding, reading, and writing modern standard Chinese (Mandarin, or *putonghua*, based on the Beijing dialect). One course each. *Lee*

1A. Abridged Elementary Chinese. (FL) Fundamentals of spoken and written modern standard Chinese (Mandarin). Intended for post-baccalaureate and summer session students. Consent of instructor required. One course. *Staff*

2A. Abridged Elementary Chinese II. (FL) Prerequisites: Chinese 1A and consent of instructor. One course. *Staff*

4, 5. Elementary Chinese Conversation. (FL) Introduction to spoken Mandarin Chinese with emphasis on basic conversational style. This course supplements Chinese 1, 2 (Elementary Chinese). Students taking Chinese 1, 2 are required to take this course. Half course each. *Lee and staff*

6, 7. Literacy in Chinese. (FL) An alternative to Chinese 1, 2 for fluent speakers of modern standard Chinese (Mandarin) with little or no reading and writing ability, who wish to make sufficient progress in two semesters to advance to Chinese 125 in the fall semester. One course each. *Yao-Lahusen*

63, 64. Intermediate Chinese. (FL) Reading, oral practice, language laboratory. One and one-half courses each. *Lee and staff*

125, 126. Advanced Chinese. (CZ, FL) Proficiency in speaking, aural comprehension, reading, and writing. Content drawn from newspaper articles, essays, and other readings concerning history, culture, and current political, social, and simple economic issues in China, Taiwan, and Hong Kong. Prerequisite: Chinese 63, 64 or equivalent. C-L: Comparative Area Studies. One course each. *Staff*

183S. Topics in Modern Chinese. (FL) Readings and other material, including films, television, and radio broadcasts. Exercises in composition. Prerequisite: Chinese 125, 126, 127, 129, or consent of instructor. C-L: Comparative Area Studies. One course. *Wang*

184S. Topics in Modern Chinese. (AL, FL) Readings of modern short stories and essays on special topics of the cultural politics in modern and contemporary China. Additional materials such as films and television. C-L: Comparative Area Studies. One course. *Staff*

188S. Seminar on Modern Chinese Cinema. (CZ, FL) Films, documentaries, television series, and soap operas produced in mainland China in the post-Mao era. Topics include the history and aesthetics of the cinema, soap operas as the new forum for public debates on popular culture, the emerging film criticism in China, the relationship of politics and form in postrevolutionary aesthetics. Prerequisites: Chinese 184S or advanced oral and written proficiency in Mandarin Chinese. One course. *Staff*

191, 192. Independent Study. One course each. *Wang and staff*

Courses Offered in the Duke Study in China Program at Capital Normal University

111A. Intensive Progress in Spoken Chinese—Intermediate Level. (FL) One course. *Staff*

111B. Intensive Progress in Reading Chinese—Intermediate Level. (FL) One course. *Staff*

112A. Intensive Progress in Spoken Chinese—Advanced Level. (FL) One course. *Staff*

112B. Intensive Progress in Reading Chinese—Advanced Level. (FL) One course. *Staff*

127A. Special Topics in Conversation and Composition—Intermediate Level. (FL) Discussion based on oral and written reports and topical readings. Aural comprehension practice. One course. *Staff*

127B. Special Topics in Reading—Intermediate Level. (FL) Reading and discussion of selections from modern Chinese literature, expository prose, and the Chinese press. One course. *Staff*

129A. Special Topics in Conversation and Composition—Advanced Level. (CZ, FL) Discussion based on oral and written reports and topical readings. Aural comprehension practice. One course. *Staff*

129B. Special Topics in Reading—Advanced Level. (CZ, FL) Reading and discussion of selections from modern Chinese literature, expository prose, and the Chinese press. One course. *Staff*

193. Directed Study. Reading and research culminating in a paper, on a topic approved and supervised by the resident director. One course. *Staff*

Courses Currently Unscheduled

147. Literature and Popular Culture in Taiwan: 1960s to the Present. (CZ)

171. The Chinese Novel: *Dream of the Red Chamber*. (AL, FL)

185S, 186S. Seminar on Contemporary China. (CZ, FL)

HEBREW (HEB)

1, 2. Elementary Modern Hebrew. (FL) Introduction to speaking, understanding, reading, and writing modern Hebrew. Language laboratory. C-L: Judaic Studies. One course each. *Zakim*

63, 64. Intermediate Modern Hebrew. (FL) Reading, composition, conversation, and language laboratory. Prerequisite: Hebrew 1, 2 or equivalent. C-L: Judaic Studies. One course each. *Zakim*

125S, 126S. Advanced Modern Hebrew. (AL, FL) Introduction to modern Hebrew literature and Israeli culture. Emphasis on critical reading of literary and cultural texts, including prose, poetry, drama, and film. Conducted in Hebrew. Prerequisite: Hebrew 64 or equivalent. C-L: Judaic Studies. One course each. *Zakim*

191, 192, 193, 194. Independent Study. One course each. *Staff*

HINDI (HIN)

1, 2. Elementary Hindi. (FL) Conversation, basic grammar, and vocabulary; introduction to the Devanagari script and the reading of graded texts. Four hours of classroom work; two hours of language laboratory drill. One course each. *Khanna*

4, 5. Elementary Hindi Conversation. (FL) Introduction to spoken Hindi with emphasis on basic conversational style. This course supplements Hindi 1, 2 (Elementary Hindi). Students taking Hindi 1, 2 are required to take this course. Half course each. *Staff*

63, 64. Intermediate Hindi. (FL) Reading, composition, and conversation. Four hours of classroom work, two hours of language drill. Prerequisites: Hindi-Urdu 1 and 2. One course each. *Khanna*

125, 126. Advanced Hindi. (FL) Proficiency in reading, writing, and speaking. Prerequisite: Hindi 63, 64 or equivalent. One course each. *Khanna*

191, 192. Independent Study. Directed reading and research. Open only to students with prior knowledge of Hindi-Urdu. One course each. *Khanna*

JAPANESE (JPN)

1, 2. Elementary Japanese. (FL) Introduction to speaking, understanding, reading, and writing. One course each. *Endo*

63, 64. Intermediate Japanese. (FL) Practice on advanced spoken and written patterns; reading and discussion. One course each. *Endo*

125, 126. Advanced Japanese. (AL, FL) Readings and other materials, including video. Exercises in composition and conversation. C-L: Comparative Area Studies. One course each. *Yanagida*

183S, 184S. Topics in Japanese. (AL, FL) Readings and other materials, including television and radio broadcasts. Exercises in composition. Consent of instructor required. C-L: Comparative Area Studies. One course each. *Ching*

191, 192. Independent Study. One course each. *Ching*

193, 194. Independent Study. One course each. *Staff*

205S, 206S. Seminar in Japanese. (AL, FL) Topics vary each semester. Prerequisite: Japanese 184 or equivalent. One course each. *Yoda*

291. Research Methods in Japanese. (SS) Introduction to various research approaches to literary, sociological, and historical studies of Japan. Emphasis on bibliographical sources that best serve needs in chosen area of specialization. Consent of instructor required. C-L: Cultural Anthropology 290, History 292, Political Science 291, and Sociology 291. One course. *Staff*

Courses Currently Unscheduled

1A, 2A. Elementary Japanese for Business Professionals. (FL)

KOREAN (KOR)

1, 2. Elementary Korean. (FL) Introduction to speaking, understanding, reading, and writing Korean. One course each. *Son-Yarbrough*

63, 64. Intermediate Korean. (FL) Spoken and written Korean. One course each. *Son-Yarbrough*

125, 126. Advanced Korean. (CZ, FL) Proficiency in speaking, aural comprehension, reading, and writing. Prerequisite: Korean 63, 64 or equivalent. C-L: Comparative Area Studies. One course each. *Staff*

183, 184. Topics in Korean. (AL, FL) Readings and other materials, including television and radio broadcasts. Exercise in composition. Essays on special topics of the cultural aspects in modern and contemporary Korea. Consent of instructor required. C-L: Comparative Area Studies. One course each. *Staff*

191, 192. Independent Study. One course each. *Staff*

PERSIAN (PER)

Courses Currently Unscheduled

- 1, 2. Elementary Persian. (FL)
- 63, 64. Intermediate Persian. (FL)
- 101, 102. Introduction to Persian Literature. (AL, FL)

SWAHILI (SWA)

1, 2. **Elementary Swahili. (FL)** Swahili language and culture with emphasis on conversation. Intensive work in language laboratory; drill sessions with native speakers. One course each. *O'Barr*

63, 64. **Intermediate Swahili. (FL)** Continuation of Swahili 1 and 2. Emphasis on contemporary Swahili literature. One course each. *O'Barr*

191, 192. **Independent Study.** One course each. *O'Barr*

THE MAJOR

Asian and African Languages and Literature offers a curriculum that reflects an increasing awareness of the interconnectedness of the globe. It provides students with an understanding of languages, literatures, and cultures beyond America and the West to prepare them for professional work or advanced graduate study in a number of international arenas. The curriculum is based on a theoretical perspective that examines contemporary national and ethnic cultures of Asia and Africa within a global context. Its mission is to foster a view of literature and culture at once indigenous and global, informed by local histories of internal development as well as by theories of cross-cultural influence. The course requirements for the major provide an intellectual vision that includes both study of language and culture practice and a critical theoretical framework for analyzing cultural experience.

The major requires a minimum of ten courses (at least eight of which must be at the 100-level or above), with concentration in one of the three following areas: Arabic, Chinese, or Japanese. Students wishing to concentrate in Hindi, modern Hebrew, or Korean should consider taking a minor in Asian and African Languages and Literature. The major is organized in accordance with three overlapping structures, as reflected in the following requirements:

- I. *Within the area of concentration*, the student will acquire advanced linguistic skills in Arabic, Chinese, or Japanese language and a comprehensive knowledge of a single culture related to each language. The major provides exposure to different methodologies for interpreting an indigenous literary and cultural tradition. Six (6) semester courses are required for this category. They include: (1) four language courses (63, 64, 125, 126 or above) at the intermediate and advanced level; (2) two courses at or above the 100-level on the literature or culture of the target language, one of which may be taken from another department. Majors should consult with their Chinese, Japanese, or Arabic advisors using a list of suggested courses.
- II. *Within the larger framework of Asian and African Languages and Literature*, the student is required to complete three (3) semester courses as follows: Introduction to Asian and African Literature and Culture (Asian and African Languages and Literature 121), the Senior Seminar (Asian and African Languages and Literature 200S), and one Asian and African Languages and Literature course outside the student's language of concentration (for example, the study of another AALL language or literature). Both Asian and African Languages and Literature 121 and 200S introduce a theoretical perspective grounded in continual cross-cultural dialogues between the cultures

of Asia and Africa. All three courses aim at helping the student to establish cross-cultural links with students concentrating in other Asian and African languages.

- III. The major in Asian and African Languages and Literature also requires students to analyze critically the issue of indigenous cultural identities. The program fosters a view of literature and culture that is at once local and global. This view draws on theoretical inquiries into indigenous cultural identities associated with such conceptual categories as gender, class, ethnicity, nation, aesthetics, and sexuality. Therefore, every student is required to complete a one (1) semester course at or above the 100 level, not originating in the Asian and African Languages and Literature program on literary and cultural theory, that includes an examination of the above conceptual categories. Students should consult with their advisors in choosing a course appropriate to their own plan of study and to their capstone experience.

Study Abroad. An integral part of the student's experience will be study abroad; while not a requirement of the major, it is strongly encouraged. Students should discuss this option as early as possible with their major advisor.

Advising. Majors will be assigned two faculty advisors (one from the literature faculty and one from the faculty of the practice) in their area of concentration. The final papers for the senior seminar will be prepared in consultation with the major advisors and a faculty member outside the field of concentration.

Honors/Distinction. Majors with grade point averages of 3.3 or higher may apply in their junior year to the director of undergraduate studies for graduation with distinction (see the section on honors in this bulletin). Students working on their honors thesis will meet together at the beginning of the spring semester of their senior year to report on their research topics and again toward the end of that semester to make a final presentation on their projects. In order to graduate with honors, the student must obtain at least an A- in the honors seminar.

THE MINOR

A minor is offered to students interested in the study of language, literature, and culture of a particular region of Asia and Africa. Areas of concentration include: Arabic, Chinese, modern Hebrew, Hindi, or Japanese.

The minor offers two tracks: (1) Concentration in an Asian and African Languages and Literature language and (2) Asian and African Languages and Literature. Five courses are required in each track.

(1) *Minor in an Area of Language Concentration:* includes Arabic, Chinese, modern Hebrew, Hindi, or Japanese. *Prerequisites:* two semesters of introductory language courses or the equivalent. *The Minor:* Four language courses beyond the level of 02. (Students are expected to take 63, 64, 125, and 126; however, students with proficiency of intermediate level or higher must take 183 and 184, or upper-level reading courses, for example, Chinese 171, Japanese 205, 206, Arabic 137, or independent studies courses to fulfill the four-course requirement). One 100-level Asian and African Languages and Literature literature or culture course in translation, open to all students without language prerequisites.

(2) *Minor in Asian and African Languages and Literature.* *Prerequisites:* two semesters of introductory language courses or the equivalent. *The Minor:* two language courses at the intermediate level (63 and 64) or above; one 100-level Asian and African Languages and Literature course in translation on the literature or culture of the area of concentration; (3) one 100-level course in another Asian and African Languages and Literature language, literature, or culture outside of the language of concentration; (4) Asian and African Languages and Literature 121 (Introduction to Asian and African Literature and Culture).

Astronomy

For courses in astronomy, see Physics.

Biochemistry

For courses in biochemistry, see Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates; also see Biology and Chemistry majors.

Biological Anthropology and Anatomy (BAA)

Professor Kay, *Chair*; Assistant Professor Pope, *Director of Undergraduate Studies*; Professors Cartmill, Glander, Hylander, Simons, Terborgh, and van Schaik; Associate Professors Roth and Smith; Assistant Professors Bassett, Churchill, and White; Associate Professor Emeritus Duke; Assistant Research Professors Brockman, Digby, and M. Spencer; Adjunct Professor Larsen; Adjunct Associate Professor Wright; Adjunct Assistant Professors Anderson and Overdorff; Instructor Johnson; Research Scientists Crissey, L. Spencer, and Struhsaker; Research Associates Ankel-Simons, Bouvier, Hamrick, Madden, Schmitt, Wall, and Williams; Lecturing Fellow Chatrath

A major or minor is available in this department.

Biological Anthropology and Anatomy is an interdisciplinary department centering on the origin and evolution of human beings and their close biological relatives. The department and its course offerings have three general focuses: primate behavior and ecology, primate paleontology, and functional and comparative anatomy. Significant opportunities for independent research are found at the Duke Primate Center, which houses a unique and diverse range of nonhuman primates, especially prosimians from Madagascar. Advanced students can study original fossils and casts at the Primate Center and in the department's laboratories in the Medical Center, which also afford opportunities to study comparative anatomy from an adaptive and evolutionary perspective. Students interested in the Primatology Program should be aware that Biological Anthropology and Anatomy 93D is a program requirement. For further information on the Primatology Program contact the program chair at the department.

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

50S. Human Biological Evolution. (NS) An overview of the fossil and archaeological evidence for human biological evolution. The development over the last two centuries of the principles used to interpret biological evolution, with particular emphasis given to the role these principles played in interpreting the earliest finds of fossil humans. Review of the primate fossil record; detailed treatment of hominid fossil materials. Open only to students in the FOCUS Program, Evolution and Humankind. One course. *Spencer*

93. Introduction to Biological Anthropology. (NS) Origins and distribution; primate evolution; a survey of human paleontology and human biology, prehistory, and language; and the origins of human social organization and culture. One course. *Staff*

93D. Introduction to Biological Anthropology. (NS) Same as Biological Anthropology and Anatomy 93 except instruction is provided in lectures and one small laboratory meeting each week. One course. *Staff*

132. Human Evolution. (NS) Evolutionary biology of the primates. Anatomical and behavioral adaptations and phylogeny of fossils and living primates including *Homo sapiens*. Prerequisites: Biological Anthropology and Anatomy 93 or equivalent. One course. *Cartmill, Glander, Simons, or staff*

133L. The Human Body. (NS) Human gross anatomy seen from a functional and evolutionary perspective. Laboratory involving study of prosected cadavers and other anatomical preparations. Prerequisites: Biological Anthropology and Anatomy 93. One course. *Cartmill, White, or staff*

143. Primate Ecology. (NS) A survey of primate ecology and behavior. Prerequisites: Biological Anthropology and Anatomy 93 or consent of instructor. One course. *Glander, Simons, van Schaik, White, or staff*

144L. Primate Field Biology. (NS) Survey of field methods used to document primate behavior. Laboratory includes observations of free-ranging primates at the Duke Primate Center. One course. *Pope or staff*

146. Sociobiology. (NS) Sociobiological theory reviewed and applied to the social behavior of nonhuman primates, hominids, and humans. Prerequisites: Biological Anthropology and Anatomy 93. C-L: Study of Sexualities. One course. *van Schaik*

151. Anatomy of the Lower Extremities. (NS) Introduction to the functional anatomy of the lower extremities. Consent of instructor required. One course. *Bassett*

172L. Primate Anatomy. (NS) The comparative anatomy of primates from the perspective of adaptation and phylogeny. Laboratory includes some dissection or prosection of human and nonhuman primates. One course. *Kay or staff*

180. Current Issues in Biological Anthropology and Anatomy. (NS) Selected topics in methodology, theory, or area. One course. *Staff*

180L. Current Issues in Biological Anthropology and Anatomy. (NS) Same as Biological Anthropology and Anatomy 180 except in laboratory format. One course. *Staff*

180S. Current Issues in Biological Anthropology and Anatomy. (NS) Same as Biological Anthropology and Anatomy 180 except in seminar format. One course. *Staff*

183. Primate Social Complexity and Intelligence. (NS) Information on primate social behavior and cognition used to examine ideas on the origins and functions of primate intelligence. Topics include communication, "ape language," alliances and reciprocity, deception and social manipulation, and the extent of awareness inferable from behavior in the wild and from experiments in captivity. One course. *Staff*

184. Primates and Tropical Forest Conservation. (NS) Main concepts of conservation biology, both at the species and community level, focusing on tropical rain forest habitats and primates. Relevant aspects of biogeography, ecology and demography; tropical deforestation, causes and consequences; conservation strategies (objectives, design of protected area networks, threats). One course. *Van Schaik*

185. Current Issues in Primatology. (NS) Selected topics in primate behavior, ecology, and conservation. Consent of instructor required. One course. *Staff*

186S. Research Internship in Primatology. (NS) Part of the Undergraduate Program in Primatology. Supervised work either in a laboratory or at the Primate Center. Consent of instructor required. One course. *Glander or White*

187S. Senior Seminar in Primatology. (NS) Part of the Undergraduate Program in Primatology. Consent of instructor required. One course. *Glander or White*

193. Independent Study. Directed reading and research culminating in a written report. Open only to qualified juniors or seniors, who, before being given permission to register, must submit to the faculty advisor a written proposal outlining the area of study and listing the goals and meeting schedule. One course. *Staff*

195S, 196S. Senior Seminar. Prerequisites: BAA 93, a 100-level course in biological anthropology and anatomy, and consent of director of undergraduate studies. One course each. *Staff*

For Seniors and Graduates

238S. Functional and Evolutionary Morphology of Primates. (NS) History and functional significance of locomotor and feeding adaptations, craniofacial morphology, sense organs, and reproductive systems in primates, including *Homo sapiens*. Consent of instructor required. Prerequisites: Biological Anthropology and Anatomy 172L or equivalent. One course. *Cartmill, Kay, or staff*

244L, S. Comparative Primate Ecology. (NS) Comparisons of the evolutionary ecology of prosimians, monkeys, and apes. With field methods. Prerequisites: Biological Anthropology and Anatomy 93 and 143 recommended. One course. *Glander or White*

245S. Primate Social Evolution. (NS) Ecological determinants of, and biological constraints on, social strategies and systems. Emphasis on primates. Prerequisites: Biological Anthropology and Anatomy 93; 143, 144L, or 146; or consent of instructor. One course. *van Schaik*

246. The Primate Fossil Record. (NS) A survey of fossil primates including early humans. The diversity, anatomy, and behavior of primates as related to the origin and spread of past primates. The radiation of each main group of primates in the succession leading to humans illustrated with slides, casts, and fossils. Topics include geochemical dating, timing of molecular clocks, and various procedures for classifying primates. Prerequisites: Biological Anthropology and Anatomy 93 or consent of instructor. One course. *Simons*

247. The Hominid Fossil Record. (NS) Origin and successive stages of development of human ancestors. Detailed analysis of adaptive types and cultural developments. Personalities and current controversies in the study of hominid paleontology. Prerequisites: Biological Anthropology and Anatomy 93, 132, or consent of instructor. One course. *Simons*

248S. Evolution of Mammals. (NS) The origin, adaptive radiation, and phylogenetic relationships of mammals, as inferred from the fossil record. Consent of instructor required. One course. *Maas*

249S. Microevolution and Sociobiology. (NS) The relationship between resource distribution, social structure, and rate and direction of evolutionary change, including speciation. Mating systems, dispersal patterns, and mechanisms of new social group formation examined from the perspective of their effects on the genetic structure of populations and species radiations. Prerequisites: Biological Anthropology and Anatomy 93, or Biology 21L/25L; BAA 143 or 146 recommended. One course. *Pope*

250. Biometry. (QR) A practically oriented overview of the statistical analysis of biological data. Topics include data collection and experimental design, methods and techniques of data organization, use of computing programs and packages, applications of appropriate parametric and nonparametric statistical techniques, assumptions and problems encountered with biological data analysis, and interpretation of results. Prerequisites: Mathematics 136, Psychology 117, Sociology 133, Statistics 10D, 110, 112, 114, 213, or equivalent, and consent of instructor required. One course. *White*

280L, 281L. Special Topics Laboratory. (NS) Special topics in methodology, theory, or area. Consent of instructor required. One course each. *Staff*

280S, 281S. Seminar in Selected Topics. (NS) Special topics in methodology, theory, or area. Consent of instructor required. One course each. *Staff*

287S. Macroevolution. (NS) Evolutionary patterns and processes at and above the species level; species concepts, speciation, diversification, extinction, ontogeny and phylogeny, rates of evolution, and alternative explanations for adaptation and evolutionary trends. Prerequisite: Biology 25L or equivalent. C-L: Biology 287S. One course. *Roth*

289L. Comparative Mammalian Anatomy. (NS) A practical survey of anatomical diversity in mammals. An emphasis on dissections of a broad variety of mammals. A broader perspective on specific anatomical features provided in the lectures. One course. *Staff*

290. Pattern and Process in Vertebrate Development. (NS) Research results on developmental processes applied to classic problems of comparative vertebrate biology. Specific focus to vary, but to include cell differentiation and migration, induction, cell-cell interaction and cell mechanics as well as craniofacial morphogenesis, development and evolution, developmental constraints and comparative embryology. Prerequisites: course in comparative or human anatomy and consent of instructor. C-L: Biology 290. One course. *Smith*

292S. Topics in Morphology and Evolution. (NS) Various aspects of vertebrate morphology and evolution, including major historical approaches to the interpretation of morphology; the evolution, development, and function of specific morphological structures; and patterns of vertebrate evolution. Consent of instructor required. One course. *Smith*

COURSES CURRENTLY UNSCHEDULED

293, 294. Evolutionary Theory. (NS)

THE MAJOR

For the A.B. Degree

Prerequisite. Biological Anthropology and Anatomy 93 or 93D.

Corequisites. Biology 25L or equivalent.

Major Requirements. Nine courses are required, not including the above prerequisites and corequisites, distributed in the following manner:

—Biological Anthropology and Anatomy 132.

—At least four courses numbered 100 or above selected from the Biological Anthropology and Anatomy present course listings.

—At least four other courses numbered 100 or above in Biological Anthropology and Anatomy or approved courses numbered 100 or above in other social and biological sciences departments.

For the B.S. Degree

Prerequisite. Biological Anthropology and Anatomy 93 or 93D.

Corequisites. Biology 25L or equivalent; Chemistry 11L, 12L, and 151L; Mathematics 31 and 32; Physics 51L and 52L, or 53L and 54L.

Major Requirements. Eight courses numbered 100 or above are required in the biological and geological sciences, not including the above prerequisites and corequisites. Of these eight courses, at least five courses must be selected from the Biological Anthropology and Anatomy present course listings; up to three courses in other biological sciences, psychology, or geology, approved by the advisor. One of these eight courses must include related laboratory/field experience; an independent study course or the research internship or seminar in primatology may be counted toward the laboratory/field experience requirement, if appropriate. At least one of the courses must concern statistics or quantitative methods (Biological Anthropology and Anatomy 250, Statistics 100 level or Psychology 117, or equivalent). At least two of these eight courses must be at the 200 level. Some courses in geology are strongly encouraged for students with interests in paleontology.

Honors/Distinction

Qualified majors are encouraged to participate in special work leading to graduation with distinction in biological anthropology and anatomy. See the section on honors in this bulletin for general requirements. Any major with a B+ average (3.3 gpa) in biological

anthropology and anatomy courses and with a B average (3.0 gpa) in all courses is eligible. Students who desire to undertake honors work should request a member of the biological anthropology and anatomy faculty to recommend their names to the director of undergraduate studies. To receive departmental honors a major must complete a paper involving significant independent research or scholarship and pass an oral examination on the paper conducted by an appointed committee of faculty members, at least two of whom should be in biological anthropology and anatomy. Normally, students will prepare their papers over the course of the senior year working in close collaboration with their committees and receiving on the average two course credits in independent study for the work.

THE MINOR

Requirements. Biological Anthropology and Anatomy 93 or 93D; one course (from approved list) in comparative anatomy or paleontology; one course (from approved list) in behavior and ecology; two elective courses, numbered 100 or above, in Biological Anthropology and Anatomy. The director of undergraduate studies may approve other courses to satisfy requirements in two subfields.

Biology (BIO)

Faculty in Botany: Professor Searles, *Chair*; Associate Professor Kohorn, *Director of Undergraduate Studies in Biology*; Professors Antonovics, Barber, Boynton, Christensen, Ramus, Reynolds, Schlesinger, Siedow, Stone, Terborgh, White, and Wilbur; Associate Professors Knoerr, Shaw, and Vilgalys; Assistant Professors Bohs, Clark, Dong, Honma, Sperry, and Sun; Professors Emeriti Anderson, W. Culbertson, Hellmers, Naylor, Philpott, and Strain; Assistant Professor of the Practice Armaleo; Research Professor C. Culbertson; Associate Research Professor Harris; Adjunct Professors Funk, Kress, Osmond, Rogers, and Wagner; Adjunct Associate Professors Lacey, Swofford, and Zimmer

Faculty in Zoology: Professor Rausher, *Chair*; Instructor Grunwald, *Associate Director of Undergraduate Studies in Biology*; Professors Barber, Brandon, Forward, Gillham, Klopfer, Laurie, Livingstone, McClay, Nicklas, H. Nijhout, Simons, Staddon, Terborgh, Tucker, Uyenoyama, Vogel, Wainwright, and Ward; Associate Professors Nowicki, Rittschof, Roth, K. Smith, and Van Schaik; Assistant Professors Crenshaw, Cunningham, Fehon, McShea, Morris, and Wilson; Professors Emeriti Bailey, Bookhout, Fluke, Gregg, and Schmidt-Nielsen; Associate Professor of the Practice Motten; Assistant Professor of the Practice Mercer; Research Assistant Research Professors Einstein, Roach, and Smyth; Adjunct Professor Schmidt-Koenig; Adjunct Associate Professor M. Nijhout; Instructor Lincoln

A major is available in biology.

The biology courses and the biology major are cooperatively administered by the Department of Botany and the Department of Zoology. Additional courses in bio-sciences are offered by the Departments of Biological Anthropology and Anatomy, Chemistry, and Psychology in Trinity College of Arts and Sciences; by the basic sciences departments in the School of Medicine; and by the School of Engineering and of the Nicholas School of the Environment.

Biology 25L constitutes the normal introductory course for students planning to major in the biological sciences and is a prerequisite for intermediate and advanced courses in biology. For nonmajors, this course may count for the area requirement in the natural sciences. Biology 19 also meets the introductory requirement by advanced placement. Biology 20L by transfer credit meets one semester of the requirement.

10L. Marine Biology. (NS) Physical and chemical characteristics of marine ecosystems and the functional adaptations of marine organisms to these systems. Lectures, field trips, and laboratories. For students not majoring in a natural science. (Given at Beaufort.) C-L: Marine Sciences. One course. *Kenney*

19. General Biology. (NS) Credit for Advanced Placement on the basis of the College Board Examination in biology. Equivalent to Biology 25L as prerequisite. One course.

20L. Introductory Biology. (NS) Credit for introductory biology by transfer of college-level work not corresponding to Biology 25L in content, but including laboratory work. May be counted toward Natural Sciences Area of Knowledge. One course.

25L. Principles of Biology. (NS) Introductory course for students planning to major in biology and for students in other majors intending to pursue a postgraduate degree in the life sciences. Provides an integrated overview of biology, covering basic principles in cell and molecular biology, energy transport, development, physiology, genetics, microevolution, macroevolution, and ecology. One course. *Nowicki*

31L. Diversity of Life. (NS) Integrated survey of biological diversity covering all five kingdoms—Monera, Protista, Plantae, Fungi, and Animalia—from an evolutionary and functional perspective. Emphasis on phylogenetic relationships for examining distinctive characteristics of each kingdom and major groups within kingdoms. Laboratory exercises coordinated with lectures with emphasis on live material to present ecological and functional anatomical features of wide variety of representative taxa. Field trips to distinctive habitats in North Carolina. May be taken before Biology 25L. One course. *Motten and Roth*

32L. Defining Moments in Organismal Evolution. (NS) The evolution of organismal diversity can be viewed as a series of important events through time. Defining moments include the evolution of photosynthesis, eukaryotic life, sexual recombination, variation in life-history, and multicellularity. Examples from the five kingdoms considered in a phylogenetic context. Historical relationships among organisms discussed using evidence from morphology, gene sequences, and biogeography. Laboratory includes inventory of organismal diversity and practical exercises to study historical relationships. One course. *Cunningham and Manos*

43D. Ecology and Society. (NS) Ecological concepts and their application to human society. Intended for nonscience majors. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

50. Life's Beginnings. (NS) Cells, molecules, and evolution from the start. The origin and evolution of life on earth as a case study in science as a human enterprise and as a way of knowing. Intended for non-biology majors. One course. *Nicklas*

53. Introductory Oceanography. (NS) Basic principles of physical, chemical, biological, and geological oceanography. Fee for required field trip to the Marine Laboratory. C-L: Geology 53. One course. *Pilkey (geology) and Searles*

90. Plants and Civilization. (NS) The origins, history, and botanical relationships of economic plants and their interface with people, evolution of domesticated plants, and the origins of agriculture. One course. *Bohs*

93S. FOCUS Program Topics in Biology. (NS) Open only to students in the FOCUS Program; for first-year students with consent of instructor. One course. *Staff*

101. Biogeography in an Australian Context. (NS) Distribution of plants and animals in space and time as determined by the interaction of geophysics, geology, climate, and evolutionary history. Special emphasis on the unique terrestrial and marine faunas and floras of the Australian continent. One course. *Searles*

102. Trees and Shrubs of North Carolina. (NS) Identification and natural history of the trees, shrubs, and woody vines. Emphasis on those cultivated or occurring naturally in North Carolina. One course. *Wilbur*

103L. General Microbiology. (NS) Classical and modern principles of the structure, physiology, and genetics of microorganisms and their roles in human affairs. Prerequisite: one course in a biological science or consent of instructor. One course. *Dong, Siedow, or Vilgalys*

108L. Developmental and Comparative Anatomy of Vertebrates. (NS) The embryology, anatomy, and evolutionary development of vertebrate organ systems. Prerequisite: Biology 25L. One course. *Staff*

110L. Ecology. (NS) Physical, chemical, and biological processes that determine the distribution and abundance of plants and animals, emphasizing physiological responses, population dynamics, species interaction, biogeography, nutrient cycling, and energy flow through food webs. Laboratory includes fieldwork. Prerequisites: Biology 25L and Mathematics 31. One course. *Livingstone, Reynolds, or Schlesinger*

112. Population Biology. (NS) How and why the abundances of animals and plants change in space and time. Growth of human and other populations, ecological interactions between populations (competition, predation, and mutualism), and conservation of threatened populations. Prerequisites: Biology 25L and Mathematics 31. One course. *Morris*

113L. Behavioral Ecology. (NS) How ecological factors shape foraging, mating, aggressive, and social behavior. Laboratory experiments and field observations from the Outer Banks environment. Independent projects and seminars. (Given at Beaufort in the summer.) Prerequisite: Biology 25L. C-L: Marine Sciences. One and one-half courses. *Rubenstein (visiting summer faculty)*

114L. Biological Oceanography. (NS) Physical, chemical, and biological processes of the oceans, emphasizing special adaptations for life in the sea and factors controlling distribution and abundance of organisms. One course (spring); one and one-half courses (summer). (Given at Beaufort and Bermuda.) Prerequisite: Biology 25L. C-L: Marine Sciences. Variable credit. *Ramus or staff*

118. Principles of Genetics and Cell Biology I. (NS) Structure and function of genes and proteins in organisms ranging from bacteria to humans. Topics include: physical properties of DNA and chromosomes; protein structure and function; transcription and translation of genetic information; segregation, recombination, and linkage of genes; evolution of genes and proteins; identification and cloning of genes; regulation of gene expression; posttranslational control of protein function; manipulating protein expression and function through genetic engineering. Prerequisites: Biology 25L and Chemistry 12L. One course. *Kohorn, Laurie, or Siedow*

119. Principles of Genetics and Cell Biology II. (NS) The role of genes and proteins in mediating basic cellular and developmental processes. Topics include: structure and function of cellular membranes and organelles; protein targeting and transport; signal transduction; role of the cytoskeleton in cell shape and motility; function of the immune system; genetic regulation of cell growth/division and the relationship to cancer; genetic control of developmental processes. Prerequisite: Biology 118. One course. *Fehon and McClay*

120. Principles of Evolution. (NS) Evidence for evolution; mechanisms of micro- and macro-evolutionary change. Genetic change in populations. Ecological, behavioral, molecular forces influencing genetic change. Speciation; phylogenetic reconstruction. Prerequisite: Biology 25L. One course. *Antonovics, Rausher, or Roth*

121. Evolution of Animal Form. (NS) A survey of the history of animal life, focusing on major revolutions in design, such as the Cambrian explosion, the Mesozoic radiation of dinosaurs, and the Cenozoic radiation of mammals. The exploration of three views of form: the Darwinian view which stresses function, the historicist view which emphasizes historical accident, and the structuralist view that form is mainly the result of fixed mathematical

relationships. The different ways in which each view applies the comparative method. Prerequisite: Biology 25L. One course. *McShea*

123. Analysis of Ocean Ecosystems. (NS) The history, utility, and heuristic value of the ecosystem; ocean systems in the context of Odum's ecosystem concept; structure and function of the earth's major ecosystems. (Given at Beaufort.) Prerequisite: one year of biology, one year of chemistry, or consent of instructor. C-L: Marine Sciences. One course. *Barber*

126. Marine Mammals. (NS) Ecology, social organization, behavior, acoustic communication, and management issues. Focused on marine mammals in the southeastern United States (for example, bottlenose dolphin, right whale, West Indian manatee). (Given at Beaufort.) Prerequisite: introductory biology. C-L: Marine Sciences. One course. *Read or staff*

126L. Marine Mammals. (NS) Laboratory version of Biology 126. (Given at Beaufort.) Prerequisite: introductory biology. C-L: Marine Sciences. One course. *Read or staff*

129L. Marine Ecology. (NS) Factors that influence the distribution, abundance, and diversity of marine organisms. Course structure integrates lectures, field excursions, and independent research projects. Topics include characteristics of marine habitats, adaptation to environment, species interactions, biogeography, larval recruitment, rocky shores, marine mammals, fouling communities, tidal flats, beaches, subtidal communities, and coral reefs. Not open to students who have taken Biology 203L. One course (fall and spring); one and one-half courses (summer). (Given at Beaufort.) Prerequisite: none; suggested—introductory ecology, invertebrate zoology, or marine botany. C-L: Marine Sciences. Variable credit. *Staff*

130L. Tropical Marine Invertebrates. (NS) (Given at Bermuda.) Prerequisite: introductory biology. See C-L: Environment 130L; also C-L: Marine Sciences. One course. *Coates*

131L. Tropical Marine Ecology. (NS) (Given at Bermuda.) Prerequisite: introductory biology. See C-L: Environment 131L; also C-L: Marine Sciences. One course. *Lipschultz or Smith*

140L. Plant Diversity. (NS) Major groups of living plants, their evolutionary origins and phylogenetic relationships. Fee for field trip. Prerequisite: Biology 25L or equivalent. One course. *Searles or Wilbur*

142L. Plant Systematics. (NS) Surveys major groups. Principles of vascular plant taxonomy with practice in identification of local flora. Lectures, laboratories, and field trips. One course. *Wilbur*

149. Comparative Biomechanics. (NS) The structure and operation of organisms in relation to the mechanics of solids and fluids. Prerequisites: Mathematics 31 and Physics 51L or equivalents. One course. *Vogel*

150L. Physiology of Marine Animals. (NS) Environmental factors, biological rhythms, and behavioral adaptations in the comparative physiology of marine animals. One course (fall); one and one-half courses (summer). (Given at Beaufort.) Prerequisites: Biology 25L and Chemistry 12L. C-L: Marine Sciences. Variable credit. *Forward*

151L. Principles of Animal Physiology. (NS) Functional aspects of respiration, circulation, neural and hormonal coordination, water balance, metabolism, thermoregulation, and responses to special environments. Prerequisites: Biology 25L and Chemistry 12L. One course. *Crenshaw or Tucker*

152. Molecular Basis of Plant Functioning. (NS) Principal physiological processes of plants, including respiration, photosynthesis, water relations, and factors associated with plant morphogenesis. Prerequisites: Biology 25L and Chemistry 12L; organic chemistry is desirable. One course. *Siedow and Sun*

154. Principles of Neurobiology. (NS) Introduction to neuroscience, including basic physiology, microstructure, and anatomy of neural tissues; mechanisms of neuronal development and integration; sensory-motor control; the neural foundations of animal behavior, and the evolution of nervous systems. Prerequisites: Biology 25L, and Chemistry 12L or equivalent. C-L: Neurobiology 154 and Psychology 135. One course. *LaMantia or Nowicki*

155L. Biochemistry of Marine Animals. (NS) Functional, structural, and evolutionary relationships of biochemical processes of importance to marine organisms. One course (fall and spring); one and one-half courses (summer). (Given at Beaufort.) Prerequisites: Biology 25L; and Chemistry 11L, 12L. C-L: Marine Sciences. Variable credit. *Rittschof*

158L. Introduction to Modern Microscopy. (NS) A hands-on approach to teach students how to use the new microscopy with an emphasis on the principles underlying their application. Prerequisite: Biology 25L. One course. *Crenshaw*

164D. Developmental Biology. (NS) Principles and problems of development and differentiation in plant and animal systems. Embryology, molecular and cellular mechanisms of determination and differentiation: developmental genetics, morphogenesis, and pattern formation. Flowering. Attention to current literature. Prerequisite: Biology 118. C-L: The University Program in Genetics. One course. *Fehon, McClay, and Nijhout*

176L. Marine Invertebrate Zoology. (NS) Structure, function, and development of invertebrates collected from estuarine and marine habitats. Not open to students who have taken Biology or Zoology 274L. One course (fall); one and one-half courses (summer). (Given at Beaufort.) Prerequisite: Biology 25L. C-L: Marine Sciences. Variable credit. *Kirby-Smith (environment)*

184L. Experimental Cell and Molecular Biology. (NS) Experimental approaches to contemporary questions in cell and molecular biology. Practical laboratory training in molecular genetics, protein chemistry and other methods used in the rapidly developing field of biotechnology. Experiments include cloning and sequencing genes, characterizing gene regulation and exploring protein structure/function relationships and subcellular localization. Prerequisite: Biology 118 or 119. One course. *Armaleo, Boynton, Dong, Kohorn, Laurie, Siedow, or Sun*

185L. Experiments in Development and Molecular Genetics. (NS) Experimental approaches in development and genetics using animal models. Laboratory training in molecular genetics, immunochemistry, microscopy, protein chemistry, and genetic screening. Experiments include immunochemical localization, in situ hybridization, polymerase chain reaction genetic screening, embryo micromanipulation, microscopic imaging, and mutant analysis. Consent of instructor required. One course. *Honma or McClay*

191, 192. Independent Study. Open to all qualified students with consent of supervising instructor and director of undergraduate studies. A maximum of three courses of 191, 192, 193T, and 194T may count toward the biology major. One course each. *Staff*

193T, 194T. Tutorial. (NS) For junior and senior majors with consent of director of undergraduate studies and supervising instructor. Three courses of 191, 192, 193T, and 194T, maximum. Variable credit. *Staff*

195S, 196S. Seminar in Biology. (NS) Variable credit. *Staff*

For Seniors and Graduates

201L, S. Animal Behavior. (NS) Survey of past developments and current controversies in animal behavior. Extensive readings, followed by individual experimental or descriptive projects in the laboratory or field (or Primate Center). Recommended background: Biology 25L, Biology 151L, and statistics, or equivalents. One course. *Klopfer*

206S. Controversies in Biology. (NS) A contentious theme for reading, discussion, and an individual or joint paper. Illustrative past topics: the nature of the creative process, causality in biological thought, the lack of political impact of many scientific developments. Open to nonmajors. One course. *Klopper*

212L. S. Phycology. (NS) Morphological and ecological characteristics of common freshwater and marine algae and principles of their classification. One course. *Searles*

215. Tropical Ecology. (NS) Ecosystem, community, and population ecology of tropical plants and animals with application to conservation and sustainable development. Prerequisite: a course in general ecology. C-L: Environment 217. One course. *Terborgh*

216L. Limnology. (NS) Lakes, ponds, and streams; their origin, development, geochemistry, energy balance, productivity, and the dynamics of plant and animal communities. Laboratory includes field trips. Offered biennially. Prerequisites: Biology 25L, Chemistry 12L, Mathematics 32, and physics; or equivalents; or consent of instructor. One course. *Livingstone*

218L. Barrier Island Ecology. (NS) An integration of barrier island plant and animal ecology within the context of geomorphological change and human disturbance. Topics include: barrier island formation and migration, plant and animal adaptations, species interactions, dune succession, maritime forests, salt marshes, sea level rise, conservation policy, and restoration ecology. Field trips to many of the major North Carolina barrier islands. Strong emphasis on field observation and independent research. (Given at Beaufort.) Prerequisite: Biology 25L or equivalent; suggested: course in botany or ecology. C-L: Environment 218L and Marine Sciences. One and one-half courses. *Evans, Peterson, and Wells (visiting summer faculty)*

220L. Mycology. (NS) Survey of the major groups of fungi with emphasis on life history and systematics. Field and laboratory exercises. One course. *Vilgalys*

222L. Entomology. (NS) The biology of insects: diversity, development, physiology, and ecology. Field trips. Prerequisite: Biology 25L or equivalent. One course. *H. Nijhout*

229L. S. Paleoecology. (NS) Global change over the last two million years. Prerequisites: two semesters of biology or geology; and one semester each of calculus, chemistry, and physics; or consent of instructors. One course. *Clark and Livingstone*

232. Microclimatology. (NS) Introduction to the micrometeorological processes. Discussion of the integration of these processes and the resulting microclimates in the rural (forest, field, and water surface) and urban environments. Methods for modification of the microclimate. C-L: Environment 232. One course. *Knoerr*

234S. Problems in the Philosophy of Biology. (NS) Consent of instructor required. See C-L: Philosophy 234S. One course. *Brandon*

237L. Systematic Biology. (NS) Theory and practice of identification, species discovery, phylogeny reconstruction, classification, and nomenclature. Prerequisite: Biology 25L or equivalent. One course. *Manos, Swofford, and Vilgalys*

241. Field Botany. (NS) Identification and recognition of the vascular flora of the Carolinas. Frequent field trips to representative habitats. Prerequisite: introductory plant identification course or consent of instructor. One course. *Wilbur*

243L. Evolution and Classification of Angiosperms. (NS) Characteristics and phylogenetic relationships of major flowering plant lineages. Emphasis on current literature, rigorous methods, modern controversies, and biological and biogeographic implications of relationships. Prerequisite: Biology 142L or equivalent. One course. *Funk, Kress, and Manos*

244. Principles of Immunology. (NS) An introduction to the molecular and cellular basis of the immune response. Topics include anatomy of the lymphoid system, lymphocyte biology, antigen-antibody interactions, humoral and cellular effector mechanisms, and control of immune responses. Prerequisites: Biology 119 and Chemistry 151L or equivalents. C-L: Immunology 244. One course. *Kostyu (immunology), McClay, and staff*

256L, S. Plant Biosystematics. (NS) Descriptive and experimental procedures used to assess systematic implications of plant evolution. Laboratory, discussion, and field-oriented problems. Prerequisites: basic courses in systematics and genetics. One course. *Manos*

257L. Molecular Systematics and Evolution. (NS) Descriptive and experimental procedures used to assess evolutionary diversity for analysis of population genetics and systematic relationships. Laboratory problems, discussion, and individual research projects. Prerequisites: basic course work in systematics, evolution, and genetics. One course. *Vilgalys*

265L. Physiological Plant Ecology. (NS) The physiological approach to interpreting adaptation in plants, with emphasis on terrestrial seed plants. Prerequisites: Biology 110L and 152 or equivalents. One course. *Staff*

267L. Community Ecology. (NS) Mechanisms that determine the distribution and abundance of plants and animals: geology, climate, physiography, soils, competition, predation, and history. Lectures focus on ecological principles. Seminars and weekend field trips. Prerequisites: an introductory ecology course and consent of instructor. One course. *Christensen or Clark*

269. Advanced Cell Biology. (NS) Structural and functional organization of cells and their components with emphasis on current research problems and prospects. Prerequisite: introductory cell biology or consent of instructor. C-L: Cell Biology 269 and Immunology 269. One course. *Siedow and staff*

272. Biogeochemistry. (NS) Processes controlling the circulation of carbon and biochemical elements in natural ecosystems and at the global level, with emphasis on soil and surficial processes. Prerequisite: Chemistry 12L or equivalent. C-L: Geology 272. One course. *Schlesinger*

274L. Biology of Marine Invertebrates. (NS) Systematic survey of the principal marine invertebrate taxa, with emphasis on structure, function, behavior, and ecology. Field trips and independent projects. Not open to undergraduates who have taken Biology 176L. (Given at Beaufort.) Prerequisite: introductory biology (Biology 25L). C-L: Environment 297L and Marine Sciences. One and one-half courses. *Dimock (visiting summer faculty)*

281. DNA, Chromosomes, and Evolution. (NS) The relationship of chromosome and DNA-sequence organization with evolution; karyotype changes and speciation; repetitive DNA, split genes, transposable elements, and evolutionary mechanisms; phylogeny reconstruction; evolution of mitosis and the chromosome cycle. Prerequisite: an introductory course in genetics or cell or molecular biology, or consent of instructor. C-L: The University Program in Genetics. One course. *Laurie and Nicklas*

283. Molecular Genetics of Organelles. (NS) Genetics, biochemistry, and molecular biology of the organelles of eukaryotic cells, and cellular symbionts. Emphasis on recent literature. Prerequisite: introductory genetics. C-L: The University Program in Genetics. One course. *Boynton and Gillham*

284. Molecular Population Genetics. (NS) Theoretical and computational basis of evolutionary biology at the sequence level. Models of nucleotide and amino acid substitution; distance measures; distance methods for phylogeny reconstruction; tests of neutrality, adaptive selection, and hitchhiking; methods for distinguishing between common ancestry and adaptation; case histories of molecular evolution. For graduate students and upper-level

undergraduates with coursework in genetics or evolution or mathematics. One course. *Uyenoyama*

285S. Ecological Genetics. (NS) Interaction of genetics and ecology and its importance in explaining the evolution, diversity, and distribution of plants and animals. Prerequisites: Biology 120 and consent of instructor. C-L: The University Program in Genetics. One course. *Antonovics*

286. Evolutionary Mechanisms. (NS) Population ecology and population genetics of plants and animals. Fitness concepts, life history evolution, mating systems, genetic divergence, and causes and maintenance of genetic diversity. Prerequisites: Biology 25L and 120 or equivalents. C-L: The University Program in Genetics. One course. *Antonovics, Rausher, and Uyenoyama*

287S. Macroevolution. (NS) Evolutionary patterns and processes at and above the species level; species concepts, speciation, diversification, extinction, ontogeny and phylogeny, rates of evolution, and alternative explanations for adaptation and evolutionary trends. Prerequisite: Biology 25L or equivalent. C-L: Biological Anthropology and Anatomy 287S. One course. *Roth*

288. Mathematical Population Genetics. (NS) Principles of formulation and analysis of dynamic mathematical models of genetic evolution. Rotating topics include: mating systems, sex ratio, stochastic processes. Prerequisites: calculus; statistics and linear algebra recommended. C-L: The University Program in Genetics. One course. *Uyenoyama*

289L. Methods in Morphometrics. (QR) Techniques for the acquisition and analysis of quantitative data for describing and comparing biological form. Topics include: image capture and analysis, two- and three-dimensional digitization, and multivariate and geometric techniques such as allometric analysis, outline and landmark-superposition methods, and deformation models. Background in statistics and linear algebra recommended. One course. *Mercer*

290. Pattern and Process in Vertebrate Development. (NS) Prerequisites: course in comparative or human anatomy and consent of instructor. See C-L: Biological Anthropology and Anatomy 290. One course. *Smith*

291. Mathematical Biology. (NS) An introduction to mathematical biology. Topics drawn from population biology, epidemiology, enzyme kinetics, chemotaxis, and developmental biology. Emphasis on robust methods for obtaining useful information from biological models. Methods include graphical, geometric, perturbation, and stability analysis. Prerequisites: Mathematics 103 or equivalent and consent of instructor. One course. *Mercer*

294. Successes in Theoretical Ecology and Evolution. (NS) Case studies in theoretical ecology and evolution with direct application to empirical systems. Includes mating systems, life history strategies, population dynamics, and infectious diseases. Prerequisites: Biology 25L and 120 or equivalents. One course. *Wilson*

295S, 296S. Seminar. (NS) Variable credit. *Staff*

COURSES CURRENTLY UNSCHEDULED

100. Perspectives on Living Systems. (NS)

261. Photosynthesis. (NS)

THE MAJOR

The Bachelor of Arts and the Bachelor of Science degrees are offered with a major in biology or in an individually designed interdepartmental concentration approved by the

director of undergraduate studies in biology. Information about the biology major may be obtained in the office of the director of undergraduate studies.

For the A.B. Degree

This degree program is the general liberal arts major program. Students contemplating a career in biological or biomedical sciences should elect the program leading to the B.S. degree. A minimum of sixteen courses is required for this major.

Prerequisites. Biology 25L, or equivalent.

Corequisites. Chemistry 11L, 12L; Mathematics 31, 32; plus three science-related courses outside the biological sciences selected from an approved list of such courses.

Major Requirements. A minimum of eight full courses in at least eight course registrations in the biosciences, not including the above prerequisites and corequisites or courses specified not for science majors; two of these courses must include related laboratory experience; one laboratory independent study course may be counted toward the laboratory requirement. The eight courses must include one core course from each of four areas: cell biology and genetics Biology 118; diversity; organism structure and function; and ecology, evolution, and systematics. These courses are prerequisites to many of the advanced courses in these subject areas. Six of these eight courses must be in biology. The remaining courses may be elected from among courses numbered 100 or above in biology, or from approved courses in the basic science departments of the School of Medicine, or from approved courses of a basic biological character in related departments. The elective courses acceptable for a biology major with an area of concentration (see below) are defined by the requirements for that concentration. At least one of these eight courses must be at the 200 level.

For the B.S. Degree

This is the program in biology for students contemplating a career in biological or biomedical sciences. A minimum of seventeen courses is required for this major.

Prerequisites. Biology 25L, or equivalent.

Corequisites. Chemistry 11L, 12L, and 151L; Mathematics 31, 32; Physics 51L or 53L and 52L or 54L. Additional corequisites may be required for particular areas of concentration (see below).

Major Requirements. A minimum of nine full courses in at least nine course registrations in the biosciences, not including the above prerequisites and corequisites or courses specified not for science majors; two of these courses must include related laboratory experience; one laboratory independent study course may be counted toward the laboratory requirement. The nine courses must include five core courses: a two semester sequence in cell biology and genetics Biology 118 and 119; and one core course from each of three areas: diversity; organismal structure and function; and ecology, evolution, and systematics. These courses are prerequisites to many of the advanced courses in these subject areas. Seven of these nine courses must be in biology. The remaining courses may be elected from among courses numbered 100 or above in biology, or from approved courses in the basic science departments of the School of Medicine, or from approved courses of a basic biological character in related departments. The elective courses acceptable for a biology major with an area of concentration (see below) are defined by the requirements for that concentration. At least one of these nine courses must be at the 200 level.

For Areas of Concentration

Students may elect to complete requirements in specified areas of concentration. Currently available areas of concentration in the biology major are: animal behavior, biochemistry, cell and molecular biology, evolutionary biology, genetics, marine biology, neuroscience, pharmacology, and plant systematics. For information on areas of concentration see the director of undergraduate studies.

The Negotiated Major

As an alternative to the above programs, a student with unusual interests in biology may arrange a negotiated concentration of study. After appropriate discussion with departmental faculty, a student may devise a program of study which must be endorsed by two members of the faculty and approved by the director of undergraduate studies. The statement of the proposed program must make clear why the negotiated major is more appropriate than a conventional major. Such a program must be arranged before the start of a student's fifth semester. The only formal limitation on this approach to the major is that it include at least five courses in biology to meet minimum Trinity College requirements.

Honors/Distinction

A program for graduation with distinction in biology is available. See the section on honors in this bulletin. The director of undergraduate studies can provide more details.

Botany (BOT)

Professor Searles, *Chair*; Professors Antonovics, Barber, Boynton, Christensen, Ramus, Reynolds, Schlesinger, Siedow, Stone, Terborgh, White, and Wilbur; Associate Professors Knoerr, Kohorn, Shaw, and Vilgalys; Assistant Professors Bohs, Clark, Dong, Honma, Sperry, and Sun; Professors Emeriti Anderson, W. Culberson, Hellmers, Naylor, Philpott, and Strain; Assistant Professor of the Practice Armaleo; Research Professor C. Culberson; Associate Research Professor Harris; Adjunct Professors Funk, Kress, Osmond, Rogers, and Wagner; Adjunct Associate Professors Lacey, Swofford, and Zimmer

See Biology for a description of the major and the list of courses taught by the botany faculty.

Canadian Studies (CAN)

Professor Thompson (history), *Director*; Professors Davis (history), Gereffi (sociology), Healy (environment), Kornberg (political science), Maddox (sociology), Mignolo (romance studies), O'Barr (cultural anthropology), Paletz (political science), Richardson (environment), J. Smith (sociology), Tiryakian (sociology), Vidmar (law), Warren (community and family medicine), and Wood (history); Associate Professors French (history), Kimbrough (economics), and Mayer (public policy); Assistant Professors Clarke (English), Jonaissaint (romance studies), and Shanahan (sociology); Professors Emeriti Cahow (history), Preston (history), and Tuthill (economic geography); Associate Professor Emeritus Hull (romance studies); Research Professor Davidson (English); Associate Research Professor Keineg (romance studies); Adjunct Professor Steen (environment); Adjunct Associate Professor Wilson (history)

A second major or a minor is available in this program.

The program in Canadian Studies seeks to provide the student with an understanding of Canada and its problems and prospects. Students may undertake the program to supplement another major, or to complete a second major in Canadian Studies, or as part of an interdepartmental concentration, or under Program II. Canadian Studies may also be an area concentration in the comparative area studies major, described elsewhere in this bulletin. See sections below on the program, the major, and the minor. The courses are described in the departmental and interdisciplinary listings.

CANADIAN STUDIES COURSES (CAN)

98. Introduction to Canada. (SS) History, economy, society, politics, and institutions of Canada. C-L: Comparative Area Studies, Economics 98, History 98, Political Science 98, and Sociology 98. One course. *Thompson*

184S. Canadian Issues. (SS) Persistent and current issues facing the Canadian nation-state, among them: cultural and regional political divisions, Indian-Euro-Canadian relations, the development of the Canadian welfare state, Canada's place in the international community and in the world economy. Prerequisite: Canadian Studies 98 or consent of instructor. C-L: Comparative Area Studies, Cultural Anthropology 184S, Economics 184S, History 184S, Political Science 184S, and Sociology 184S. One course. *Staff*

185S. The Canadian Health Care System. (SS) The Canadian health care system from its historical roots: social, political, legal, and economic aspects. An examination of how the system works from the point of view of society, the professional community, and the government. Comparative material included. C-L: Comparative Area Studies, Cultural Anthropology 185S, Economics 185S, History 108E, Political Science 185S, Public Policy Studies 187S, and Sociology 185S. One course. *Warren or staff*

282S. Canada. (SS) A research seminar for advanced students familiar with Canada. Topics vary each semester; recent perspectives have included nationalism, Canadian-American relations, regionalism in the Maritimes and the West, and cross-border environmental issues, among others. C-L: Comparative Area Studies, Cultural Anthropology 282S, Economics 282S, History 282S, Political Science 282S, and Sociology 282S. One course. *Thompson or staff*

DEPARTMENTAL COURSES

The following courses count as one course in the five required for the minor in Canadian Studies and in the ten required for the major in Canadian Studies. Independent studies may also be arranged with Canadian Studies faculty.

Cultural Anthropology

110. Advertising and Society: Global Perspective. *Luttrell, O'Barr, J. Smith, or Wilson*

Economics

265. International Economics. *Brofenbrenner, Kimbrough, and Tower*

English

49S. Writing the Native in Canadian, American, Australian, and New Zealand Fiction. *A. Davidson*

100C,S. Writing: Poetry. *Clarke*

131. Margaret Atwood. *A. Davidson*

179S. Introduction to English-Canadian Literature. *Clarke*

186A,S. Canadian Literature in English. *A. Davidson*

288. New World African Literature in English. *Clarke*

French

169. The Contemporary Novel in French Canada. *Keineg*

Health Administration

Students interested in this area should consult the director of the Canadian Studies Program.

History

106S. Geography of Canada. *Staff*

108C. Canadian-American Relations. *Thompson*

108D. Across the Great Divides: United States and Canadian Wests in the Nineteenth and Twentieth Centuries. *Thompson*

119A, B. Native American History. *Wood*

121B. The United States as a World Power: 1861-1940. *Staff*

183S. Canada from the French Settlement. *Thompson*

195S, 196S. American Dreams / American Realities. *Wilson*

195S.45. Canadian and American Agrarian Movements. *Thompson*

196S.24. Problems in Recent United States Diplomatic History. *Davis*

216S. United States Diplomacy, 1890-1945. *Davis*

North American Studies

283S. Seminar in North American Studies. C-L: Cultural Anthropology 283S, History 283S, Political Science 285S, Public Policy Studies 282S, and Sociology 283S. *Staff*

Political Science

117. Comparative Government and Politics: Selected Countries. *Staff*

180. Media in Comparative Perspective. *J. Smith*
 203S. Issues in Politics and the Media in the United States. *Paletz*
 266. Comparative Social Policy. *Staff*
 277. Comparative Party Politics. *Lange*

Public Policy Studies

- 265S. The Process of International Negotiation. C-L: Political Science 265S. *Mayer*

Romance Studies

124. Modernity, Ethnicity and Colonization. C-L: Comparative Area Studies and Cultural Anthropology 130. *Mignolo and staff*

Sociology

167. The Social Bases of Politics. *Gereffi or J. Smith*
 171. Comparative Health Care Systems. *Staff*
 179. Modern Nationalist Movements. *Tiryakian*
 182. Media in Comparative Perspective. *J. Smith*

THE MAJOR

Prerequisite: Canadian Studies 98.

Corequisite: Completion of another major; two years of college-level French.

Major Requirements. Ten courses with Canadian content, including Canadian Studies 98 and 184S and eight additional courses, seven of which must be at the 100 level or above. Some of the course requirements may be fulfilled by independent study or special readings courses. No more than four courses required for the first major may be counted for a Canadian Studies major. In special cases, an aboriginal or "heritage" language may be substituted for the French requirement.

THE MINOR

Requirements. Five courses with Canadian content; three must be at the 100 level or above; courses must include Interdisciplinary Canadian Studies 98 (Introduction to Canada) and 184S (Canadian Issues). Strong encouragement for equivalent of two years of college-level French or participation in summer program at L'Université du Québec à Trois Rivières.

For further information, contact the Director, 2016 Campus Drive.

Cell Biology

For courses in cell biology, see Biology and Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates.

Chemistry (CHM)

Professor Baldwin, *Chair*; Professor Bonk, *Director of Undergraduate Studies and Supervisor of Freshman Instruction*; Professors Chesnut, Crumbliss, Lochmüller, McGown, McPhail, Palmer, Pirrung, Porter, Shaw, and Wells; Associate Professors Fierke (biochemistry), MacPhail, Toone, and Yang; Assistant Professors Burk, Coury, Grinstaff, and Oas (biochemistry); Professors Emeriti Arnett, Bradsher, Hobbs, Poirier, Quin, Smith, Strobel, and Wilder; Adjunct Professors Ghirardelli, Kiserow, and Sternbach; Adjunct Associate Professor Chao; Adjunct Assistant Professor Andrews; Lecturers D'Silva and Woerner

A major or minor is available in this department.

Courses with laboratories include fifty to sixty hours of laboratory work per term.

11L, 12L. Principles of Chemistry. (NS) The introductory course for students who intend to take additional chemistry courses other than Chemistry 83. 11L: emphasizes stoichiometry and atomic and molecular structures. 12L: emphasizes thermodynamics, chemical kinetics, synthesis, and analysis. Laboratory work includes both qualitative and quantitative analysis.

Prerequisites: one year of high school chemistry or consent of instructor; Mathematics 19 or its equivalent; and for 12L: Chemistry 11L. One course each. *Bonk and staff*

19. General Chemistry. (NS) Credit for Advanced Placement on the basis of the College Board examination in chemistry. Equivalent to Chemistry 11L and 12L as prerequisite. One course.

23L. Advanced General Chemistry. (NS) An intensive introductory course for well-prepared students, covering in one semester the major topics of Chemistry 11L and 12L. Laboratory work includes both qualitative and quantitative analysis. Students may not receive credit for both Chemistry 23L and Chemistry 11L, 12L or Chemistry 31S. Prerequisites: Mathematics 19 or its equivalent; and two years of high school chemistry or consent of instructor. One course. *Bonk and staff*

26S. Introduction to Research in Chemistry. (NS) Active participation in chemistry (or chemistry related) research group, followed by seminar classes in which the research activities are discussed. Prerequisite: Chemistry 11L or 19. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

117. Inorganic Chemistry. (NS) Bonding, structures, and reactions of inorganic compounds studied through physical chemical concepts. Prerequisite: Chemistry 161 or 162L. One course. *Burk, Crumbliss, Grinstaff, McPhail, Palmer, or Wells*

131. Analytical Chemistry. (NS) Fundamentals of qualitative and quantitative measurement with emphasis on chemometrics, quantitative spectrometry, electrochemical methods, and common separation techniques. Corequisite: Chemistry 133L. Prerequisite: Chemistry 163L. One course. *Coury, Lochmüller, or McGown*

133L. Analytical Chemistry Laboratory. (NS) Laboratory experiments designed to accompany Chemistry 131. Corequisite: Chemistry 131. Half course. *Staff*

151L, 152L. Organic Chemistry. (NS) The structures and reactions of the compounds of carbon. Laboratory: techniques of separation, organic reactions and preparations, and systematic identification of compounds by their spectral and chemical properties. Prerequisite: Chemistry 12L, 23L, or 31S or consent of director of undergraduate studies; for 152L: Chemistry 151L. One course each. *Baldwin, Pirrung, Porter, or Toone*

161. Physical Chemistry. (NS) Fundamentals of theoretical chemistry with particular emphasis on chemical thermodynamics and kinetics. Chemistry 163L should be taken concurrently. Prerequisites: Chemistry 12L, Mathematics 32, and Physics 52L or 54L. One course. *Chesnut, MacPhail, McPhail, or Yang*

162L. Physical Chemistry. (NS) Fundamentals of theoretical chemistry with particular emphasis on quantum chemistry, molecular structure, and molecular spectroscopy. Laboratory. Prerequisite: Chemistry 12L, Physics 52L or 54L, Mathematics 32 or consent of instructor. One course. *Chesnut, MacPhail, McPhail, or Yang*

163L. Physical Chemistry Laboratory. (NS) Laboratory experiments designed to accompany Chemistry 161. Prerequisite: (or corequisite) Chemistry 161. Half course. *Staff*

176. Biophysical Chemistry. (NS) The physical chemical principles of and experimental methods employed in the study of biological macromolecules. Students may not receive credit for both Chemistry 176 and 196S. Prerequisite: Chemistry 161 or Biochemistry 227. One course. *Shaw*

180L. Advanced Laboratory Techniques. (NS) Synthesis of less common substances by techniques such as high or low pressure, high or low temperature, and/or inert atmospheres. Characterization of products from measurements such as electrical conductance, optical

rotation, ultraviolet-visible spectra, infrared spectra, and/or mass spectra. Prerequisite: (or corequisite) Chemistry 117. Half course. *Staff*

191, 192. Independent Study. Supervised reading and research. Half or one course. Consent of instructor required. Variable credit. *Staff*

193, 194. Independent Study. Supervised reading and research. Prerequisites: Chemistry 191, 192, and consent of independent study coordinator. One course each. *Staff*

195S, 198S. Seminar. (NS) Half course or one course. Variable credit. *Staff*

196S. Seminar. (NS) Selected topics in physical chemistry of biological macromolecules. Students may not receive credit for both Chemistry 176 and 196S. Prerequisites: Chemistry 163L and 175 or Biochemistry 227. One course. *Henkens or Shaw*

197S. Seminar. (NS) Special topics in biological chemistry (e.g., immunochemistry, molecular biology). Prerequisite: Chemistry 161L; Chemistry 175 recommended. One course. *Staff*

For Seniors and Graduates

201. Molecular Spectroscopy. (NS) Selected spectroscopic methods in the study of molecular structure. Symmetry and group theoretical basis for selection rules, theories of magnetic and optical resonance, and interpretation of spectra; examples from both inorganic and organic chemistry. Three lectures. Open to especially well-prepared undergraduates by consent of director of undergraduate studies. One course. *Baldwin, Grinstaff, Palmer, Pirrung, and Shaw*

203. Quantum Chemistry. (NS) Basic principles of quantum and group theoretical methods. Topics include symmetry and a review of the fundamentals and the mathematical foundations of quantum theory. Emphasis on the application of molecular orbital theory to organic and inorganic systems. Open to especially well-prepared undergraduates by consent of director of undergraduate studies. Prerequisite: Chemistry 162L. One course. *Chesnut, MacPhail, Pirrung, and Porter*

205. Structure and Reaction Dynamics. (NS) Structure and mechanisms in organic and inorganic compounds, substitution reactions, linear free energy relations, and molecular rearrangements. Emphasis on the use of kinetic techniques to solve problems in reaction mechanisms. Three lectures. Open to especially well-prepared undergraduates by consent of director of undergraduate studies. One course. *Crumbly, Porter, Toone, and Wells*

207. Principles of Kinetics, Thermodynamics, and Diffraction. (NS) Three lectures. Open to especially well-prepared undergraduates by consent of director of undergraduate studies. One course. *McPhail and Yang*

209. Advanced Chemistry. (NS) A combination of three one-third course segments from Chemistry 201, 203, 205, and 207. Interested students should consult the director of undergraduate studies for scheduling. Consent of director of undergraduate studies required. One course. *Staff*

275, 276. Advanced Studies. (NS) (1) Analytical chemistry, (2) inorganic chemistry, (3) organic chemistry, and (4) physical chemistry. Open to especially well-prepared undergraduates by consent of director of undergraduate studies. One course each. *Staff*

COURSES CURRENTLY UNSCHEDULED

31S. Advanced Chemical Fundamentals. (NS)

83. Chemistry and Society. (NS)

151M, 152M. Organic Chemistry. (NS)

175. Molecular Basis of Biological Processes. (NS)

THE MAJOR

Differing major programs are offered under the baccalaureate degrees, including a new concentration in the area of biochemistry. The Bachelor of Arts degree programs permit greater flexibility in allowing students to select an area of concentration while satisfying the junior-senior small group learning experience requirements through seminar courses (option one) or through independent study in chemistry or related departments (option two). Of particular significance are the areas of emphasis (option three) including biology, mathematics, physics, materials science, and chemical engineering. The Bachelor of Science degree program, accredited by the American Chemical Society, provides in-depth preparation for graduate study in chemistry.

For the A.B. Degree

Prerequisites. Chemistry 11L, 12L (or 23L, 31S, or 19). Mathematics 31L, 32L (or 41); Physics 51L, 52L (or 53L, 54L).

Major Requirements. Chemistry 131 and 133L, 151L, 152L, 161 and 163L, plus one of the following three course options:

1. Three of the following: Chemistry 117, 162L, 176, 195S, 196S, 198S, Biochemistry 227, 228.
2. One of the following: Chemistry 117, 162L, Biochemistry 227, plus Chemistry 191, 192 or the equivalent in a natural science, mathematics, engineering, or a basic science department in the School of Medicine.
3. One of the following:
 - a. Physics emphasis. Chemistry 162L plus two of the following: Physics 143L, Physics 181, Physics 182.
 - b. Mathematics emphasis. Chemistry 162L plus two of the following: Mathematics 104, Mathematics 111, Mathematics 114, Mathematics 131.
 - c. Biology emphasis. Biochemistry 227 plus two of the following: Biology 151, Biology 152, Biology 160, Biology 184L, Biology 244.

In certain cases, substitutions may be made for courses outside the chemistry department with consent of the director of undergraduate studies.

Recommendations. Computer Science 8 or Engineering 51, Mathematics 103 (for options one and two), and Chemistry 162L. Students planning graduate study are advised to take these recommended courses and to consult with advisors regarding appropriate additional courses.

For the B.S. Degree

Prerequisites. Chemistry 11L, 12L (or 23L, 31S, or 19). Mathematics 31, 32 (or 31L, 32L or 41); and Physics 51L, 52L (or 53L, 54L).

Major Requirements. Chemistry 117, 131, 133L, 151L, 152L, 161, 162L, 163L, 180L, plus three or four additional courses selected according to option 1, 2, or 3.

1. Three chemistry courses selected as follows.
Chemistry 191, 192.
Plus: Chemistry 176, 195S, 196S, 198S, 201, 203, 205, 207, 209, 275 or 276.
2. Two chemistry courses plus one approved course in another department selected as follows.
At least one of the following: Chemistry 191 or 192.
Plus: Chemistry 176, 195S, 196S, 198S, 201, 203, 205, 207, 209, 275 or 276.
Plus: One lecture course in an approved science department in Trinity College, basic science of the School of Medicine, or in the School of Engineering.

3. Two chemistry courses plus two independent study courses in an approved department selected as follows.

At least two of the following: Chemistry 176, 191, 195S, 196S, 198S, 201, 203, 205, 207, 209, 275 or 276.

Plus: Two approved independent study courses in a science department in Trinity College, basic sciences of the School of Medicine, or in the School of Engineering.

Chemistry 201, 203, 205, and 207 are offered also in one-third semester segments; in some instances a student may wish to take some combination of three of these segments by registering for Chemistry 209. Additional details may be obtained from the director of undergraduate studies.

Recommendations. Mathematics 103, 104 and Physics 100. Students planning graduate study in chemistry should consult with advisors regarding appropriate additional courses.

The Concentration in Biochemistry

In cooperation with the Department of Biochemistry in the School of Medicine, the chemistry department offers both an A.B. and a B.S. degree in chemistry with concentration in biochemistry. Certification of this concentration is designated on the official transcript.

For the A.B. Degree with Concentration in Biochemistry

Prerequisite: Chemistry 11L, 12L (or 23L, 31S, or 19); Mathematics 31, 32 (or 31L, 32L or 41); Physics 51L, 52L (or 53L, 54L); and Biology 25L.

Major Requirements. Chemistry 131/133L, 151L, 152L, 161/163L; Biochemistry 227, 228; plus one of the following: Chemistry 176, 191, 195S, 198S; Biology 118, 184L, 191; or any advanced course in biochemistry.

For the B.S. Degree with Concentration in Biochemistry

Prerequisites. Chemistry 11L, 12L (or 23L, 31S, or 19). Mathematics 31, 32 (or 31L, 32L or 41); Physics 51L, 52L (or 53L, 54L); and Biology 25L.

Major Requirements. Chemistry 117, 131/133L, 151L, 152L, 161/163L, 162L; Biochemistry 227, 228; Biology 118, 119; plus one of the following: Chemistry 191, Biology 191, or Biochemistry 209.

Recommendations. Mathematics 103; Chemistry 180L*, 192, 195S, 198S; Biology 184L, 192; advanced courses in biochemistry.

The Concentration in Environmental Chemistry

In cooperation with the School of the Environment, the chemistry department offers both an A.B. and a B.S. degree in chemistry with a concentration in environmental chemistry. Certification of the concentration is designated on the official transcript.

For the A. B. Degree with Concentration in Environmental Chemistry

Prerequisites. Chemistry 11L, 12L (or 23L, 31S, or 19); Mathematics 31, 32 (or 31L, 32L or 41); Physics 51L, 52L (or 53L, 54L); plus two of the following: Biology 25L, Geology 41, Geology 120.

Major Requirements. Chemistry 131 and 133L, 151L, 152L, 161 and 163L; Environment 241; either Environment 240 or 242; plus one of the following: Chemistry 117, 176, 191**, 195S, 198S; Biology 110L; Environment 191, 243.

* Majors who wish to earn a B.S. in chemistry that is certified by the American Chemical Society must include Chemistry 180L (half course).

**The independent study project must involve some aspect of environmental chemistry.

For the B.S. Degree in Chemistry with Concentration in Environmental Chemistry

Prerequisites. Chemistry 11L, 12L (or 23L, 31S, or 19); Mathematics 31, 32 (or 31L, 32L or 41); Physics 51L, 52L or (53L, 54L); plus two of the following: Biology 25L, Geology 41, Geology 120.

Major Requirements. Chemistry 117, 131 and 133L, 151L, 152L, 161 and 163L, 162L; Environment 241, either Environment 240 or 242, plus one of the following: Chemistry 191*, Environment 191.

Recommendations. Chemistry 180L**, 192, 195S, 198S; Mathematics 103, Biology 110L, Environment 192, 243.

Honors/Distinction

The department offers a program for graduation with distinction in chemistry. See the section on honors in this bulletin. The program involves two semesters of independent study, taken either in the chemistry department (Chemistry 191, 192) or, with the prior approval of the coordinator of independent study, in an appropriate science department in Trinity College, the School of Engineering, or the School of Medicine. A research paper based upon the independent study and nomination by the research supervisor form the basis for consideration by a departmental committee. The committee may recommend the student for graduation with distinction in chemistry.

THE MINOR

Requirements. Chemistry 11L or 19; any four of the following courses: Chemistry 12L, any Chemistry course at the 100 level or above, Biochemistry 227, Biochemistry 228, Environment 240, Environment 241, or Environment 242.

Chinese

For courses in Chinese, see Asian and African Languages and Literature.

Classical Studies (CS)

Professor Boatwright, *Chair*; Professor Younger, *Director of Undergraduate Studies*; Professors Burian, Clay, Connor, Davis, Newton, Oates, Rigsby, and Stanley; Assistant Professor Janan; Professors Emeriti Richardson and Willis; Adjunct Assistant Professor Cormack; Senior Lecturing Fellow Zarker

Majors and minors are available in this department.

The objective of classical studies is to increase knowledge and understanding of the roots of Western culture in the civilizations of Greece and Rome. Toward this aim, the department offers courses in three areas (Latin, Greek, and classical studies) and two majors (classical languages, classical studies). Concentration in the languages offers students training in exploring at first hand the literature, history, and thought of antiquity. In the process, students will gain a deeper insight into language itself, as well as an appreciation of the problems of interpretation and the varieties of evidence upon which interpretation may be based. For students interested in history, ancient art, or archaeology, courses in classical studies offer a means of assessing the culture and the material remains of Greece and Rome in their own rich and varied context.

Students considering careers not in classical studies or in a closely related discipline will also enjoy the benefits from either major offered by the department. They will find that the experience of analyzing language, literature, artifacts and architecture, and other ancient

*The independent study project must involve some aspect of environmental chemistry.

** Majors who wish to earn a B.S. in chemistry that is certified by the American Chemical Society must include Chemistry 180L (half course).

evidence hones their intellectual abilities well for any profession, and perhaps especially for law and finance. They will also find that the department's emphasis on clarity of thought and persuasive communication, through writing and speaking, will provide them with invaluable skills for future success.

GREEK (GRK)

1-2. Elementary Greek. (FL) A study of grammar and an introduction to reading. Two courses. *Staff*

14S. Intensive Elementary Greek. (FL) Introduction to the grammar, offered only in the summer; combining the work of Greek 1 and 2 in one course. Two courses. *Staff*

15S. Intensive Intermediate Greek. (FL) Combining the work of Greek 63 and 64 in one course, offered only in the summer; selected readings in prose and poetry. Two courses. *Staff*

63, 64. Intermediate Greek. (FL) Introduction to Greek prose and poetry. 63: Plato's *Republic*, *Apology*, or *Symposium*. 64: Euripides and Homer. One course each. *Staff*

64A. Intermediate Greek. (FL) Review of grammar, reading of selected texts. Consent required. Taught at the Intercollegiate Center for Classical Studies in Rome. One course. *Staff*

104A. Advanced Greek. (AL, FL) Readings vary. Consent required. Taught at the Intercollegiate Center for Classical Studies in Rome. One course. *Staff*

104S, 105S. Studies in Greek Literature. (AL, FL) 104S: Herodotus and Sophocles. 105S: Thucydides and Aristophanes. One course each. *Staff*

200. Readings in Greek Literature. (AL, FL) One course. *Staff*

203. Homer. (AL, FL) Problems of language and structure in the *Iliad*; present state of Homeric scholarship. One course. *Burian or Stanley*

205. Greek Lyric Poets. (AL, FL) Fragments of the early lyric poets; selected odes of Pindar and Bacchylides. One course. *Burian or Stanley*

207. The Dramatists. (AL, FL) Readings and studies of selected plays by the major playwrights Aeschylus, Sophocles, Euripides, and Aristophanes. One course. *Burian*

211. Greek Literature in the Roman Empire. (AL, FL) Readings in the Second Sophistic, the novel, history, philosophy, and poetry. One course. *Rigsby*

222. The Historians. (AL, FL) Readings and studies in the major Greek historians Herodotus, Thucydides, and Xenophon. One course. *Connor or Oates*

Courses offered each year on demand in consultation with the director of undergraduate studies:

191, 192. Independent Study. Directed reading and research. Open only to qualified juniors and seniors. Half or one course. Variable credit. *Staff*

217T. Greek Prose Composition. (FL) The course content is determined by the needs of the students enrolled. One course. *Staff*

Courses Currently Unscheduled

209. Introduction to Hellenistic Literature. (AL, FL)

210. Alexandrian Poetry. (AL, FL)

226. The Orators. (AL, FL)

LATIN (LAT)

1-2. Elementary Latin. (FL) Study of the structure of the language (forms, vocabulary, syntax, and pronunciation); selected readings in prose and poetry. Two courses. *Staff*

14S. Intensive Elementary Latin. (FL) Introduction to the grammar, offered only in the summer; combining the work of Latin 1 and 2 in one course. Two courses. *Staff*

15S. Intensive Intermediate Latin. (FL) Combining the work of Latin 63 and 64 in one course, offered only in the summer; selected readings in prose and poetry. Two courses. *Staff*

63. Intermediate Latin: Prose. (FL) Review of grammar and reading of selected prose, including Caesar. One course. *Staff*

64. Intermediate Latin: Vergil. (FL) Selected books of Vergil's *Aeneid*. One course. *Staff*

64A. Intermediate Latin. (FL) Review of grammar, reading of selected texts. Consent required. Taught at the Intercollegiate Center for Classical Studies in Rome. One course. *Staff*

100. Introduction to Literature. This number represents course credit for a score of 4 or 5 on one or more of the College Board Advanced Placement tests in Latin. One course.

104. Advanced Latin. (AL, FL) Transition course for freshmen and sophomores from high school to college Latin. Review grammar; readings in prose and poetry. Not open to students who have taken Latin 101. Prerequisite: achievement score of 640 or above, or a College Board Placement score of 4 or 5 in Latin. One course. *Clay*

104A. Advanced Latin. (AL, FL) Readings vary. Consent required. Taught at the Intercollegiate Center for Classical Studies in Rome. One course. *Staff*

105S. Ovid: *The Metamorphoses*. (AL, FL) The poem studied as representative of Ovid's varied narrative art, as the largest-scale Roman treatment of classical myths, and as Ovid's statement on Augustanism. One course. *Davis, Janan, or Newton*

107S. Vergil's *Aeneid*. (AL, FL) Reading and analysis of the *Aeneid*, with particular attention to stylistics and historical setting. One course. *Davis or Newton*

108S. Lyric and Occasional Poetry. (AL, FL) Readings in the works of Catullus, Horace, and Martial. One course. *Davis, Janan, or Newton*

109S, 110S. Studies in Latin Literature. (AL, FL) 109S: the Late Republic, including Catullus and Cicero. 110S: the Age of Augustus, including Horace and Livy. One course each. *Davis, Janan, or Stanley*

111S. Elegiac Poets. (AL, FL) The traditions of Latin love elegy and its development in Propertius, Tibullus, and Ovid. One course. *Davis or Janan*

112S. Roman Comedy. (AL, FL) Representative plays of Plautus and Terence with lectures on the genre and its Greek forebears. One course. *Richardson*

116S. Lucretius. (AL, FL) The *De Rerum Natura* studied as poetry and philosophical thought. One course. *Clay or Newton*

200. Readings in Latin Literature. (AL, FL) One course. *Staff*

205. The Roman Novel. (AL, FL) Readings in Petronius and Apuleius. One course. *Davis, Richardson, or Stanley*

206S. Cicero. (AL, FL) One course. *Richardson*

207S. Vergil's *Aeneid*. (AL, FL) Intensive analysis of all of Vergil's *Aeneid*, focusing on text and historical context, complemented by research papers and reports. Not open to students who have taken Latin 107S. One course. *Davis or Newton*

208S. Lyric and Occasional Poetry. (AL, FL) Readings in the works of Catullus, Horace, and Martial. Same as 108S, except additional term paper required. One course. *Davis, Janan, or Newton*

214S. The Historians. (AL, FL) Investigations of the Romans' conceptions and practices of writing history, based on detailed analysis of the works of Sallust, Livy, and Tacitus. Additional readings in the fragments of other Latin historians, and in comparative Greek historians. One course. *Boatwright or Richardson*

221. Medieval Latin. (AL, FL) Selected works of the Latin Middle Ages from Prudentius to the humanists. Genres studied usually include the hymn, sequence, drama, lyric, saints' lives, chronicle, epic, and epistle. C-L: Medieval and Renaissance Studies. One course. *Newton*

Courses offered each year on demand in consultation with the director of undergraduate studies:

191, 192. Independent Study. Directed reading and research. Open to qualified juniors and seniors. Half or one course. Variable credit. *Staff*

217T. Latin Prose Composition. (FL) The course content is determined by the needs of the students enrolled. One course. *Staff*

Courses Currently Unscheduled

106S. Roman Satire. (AL, FL)

170. Special Topics in Latin Literature. (AL, FL)

204. Epic of the Silver Age. (AL, FL)

211S. Elegiac Poets. (AL, FL)

CLASSICAL STUDIES (CS)

11S. Greek Civilization. (CZ) The culture of the ancient Greeks from the Bronze Age to Alexander the Great: art, literature, history, philosophy, and religion. One course. *Staff*

12S. Roman Civilization. (CZ) The culture of the ancient Romans from their beginnings to Constantine: art, literature, history, philosophy, and religion. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

53. Greek History. (CZ) The political and intellectual history of the Hellenes from earliest times to the death of Alexander the Great. C-L: History 53. One course. *Oates*

54. Roman History. (CZ) The Roman Republic and Empire to the Late Antique. C-L: History 54. One course. *Boatwright or Oates*

70. The Age of Augustus. (CZ) Augustus (63 B.C.-A.D. 14), the person, politician, and genius of a new age. His impact on contemporary historical, biographical, and literary writings, and on the architecture of his new empire, its coinage, and his own portraiture. C-L: History 94. One course. *Staff*

99. Perspectives in Archaeology. (CZ) Not open to students who have taken Religion 99. See C-L: Religion 177; also C-L: Judaic Studies. One course. *C. Meyers, E. Meyers, Younger, and staff*

100. History of Ancient Philosophy. (CZ) Not open to students who have taken Classical Studies 93 or Philosophy 93. See C-L: Philosophy 100. One course. *Ferejohn or Mahoney*

- 101. Science and Technology in the Ancient World. (CZ)** Technical innovation and scientific thought in the ancient Near East, Greece, and Rome. C-L: History 178A. One course. *Rigsby*
- 102. History of Greek and Roman Civil Law. (CZ)** The development of law from the early Greek *polis* and Rome of the XII Tables to the *Digest* of Justinian, emphasizing civil law and procedure. C-L: History 182C. One course. *Oates*
- 104S. Women in the Ancient World. (CZ)** The perception and reality of the roles, functions, and status of women from the time of Homer to late antiquity. C-L: History 126S and Women's Studies. One course. *Boatwright*
- 106. Drama of Greece and Rome. (AL)** Reading in translation of selected tragedies (Aeschylus, Sophocles, Euripides, Seneca) and comedies (Aristophanes, Menander, Plautus, Terence) with emphasis on contemporary theatrical practice, political, social, and cultural developments, and influence on later European drama. C-L: Drama 170. One course. *Burian or Clay*
- 113. Aristotle. (CZ)** See C-L: Philosophy 123. One course. *Ferejohn*
- 115. The Classical Tradition. (AL)** The notion of the "classical" from the creation of the archetype to the present. One course. *Burian*
- 116S. The Pagan World of the Divine Comedy. (AL)** See C-L: Distinguished Professor Course 190S; also C-L: Medieval and Renaissance Studies. One course. *Clay*
- 117. Ancient Myth in Literature. (AL)** Myth in classical and medieval writers from Hesiod to Boccaccio. C-L: Medieval and Renaissance Studies. One course. *Davis or Newton*
- 120. Principles of Archaeology. (CZ)** Introduction to the many disciplines of archaeology, including a history of the subject, excavation techniques, surveying, scientific application, creating stylistic typologies, mechanical drawing, and the interpretation of archaeological evidence. Not open to students who have taken Classical Studies 95. One course. *Younger*
- 123. Greek Art and Archaeology. (AL)** Greek architecture, sculpture, and painting in the Classical period. Not open to students who have taken Art 123. C-L: Art History 123. One course. *Younger*
- 128. Art of the Roman Empire. (AL)** Not open to students who have taken Art 128 or Classical Studies 126. See C-L: Art History 128. One course. *Cormack*
- 130. Late Antique Christian Art. (AL)** Not open to students who have taken Art 130. See C-L: Art History 130; also C-L: Religion 130. One course. *Wharton*
- 139. Aspects of Medieval Culture. (CZ)** Not open to students who have taken Art 139. See C-L: Medieval and Renaissance Studies 114; also C-L: Art History 139 and History 116. One course. *Rasmussen, Solterer, or Witt*
- 144. Roman Architecture. (AL)** Not open to students who have taken Art 126B. See C-L: Art History 126B. One course. *Cormack*
- 145. Rome: History of the City. (AL, CZ)** The development of the urban plan and its major monuments through the ages; the influence of the ancient Republic and Empire, the Papacy, and the modern secular state; change and continuity in artistic forms and daily life. (Taught on site in Italy in summer.) Not open to students who have taken Art 126 or Art 126A. C-L: Art History 126A. One course. *Staff*
- 147. Ancient Greece. (CZ)** On-site study of the cultures in Greece from Neolithic to Medieval, concentrating on Athens, the Peloponnese, Crete, and the Cyclades. Summer

program in Greece. Not open to students who have taken Art 115. Prerequisite: Classical Studies 11S, 53, 123, or 124, or History 53, or consent of instructor. C-L: Art History 115. One course. *Younger*

148. The Ancient City. Examination of the archaeological monuments of Rome and other Italian sites, as well as literary sources, inscriptions, and works of art. Consent required. Taught in Rome as part of the Intercollegiate Center for Classical Studies program. Students must register for both 148A and 148B. No credit.

148A. Art and Archaeology. (AL) One course. *Staff*

148B. Political, Social, and Cultural Context. (CZ) One course. *Staff*

155. The Aegean Bronze Age. (CZ) Application of archaeological techniques and procedures to problems in the development of the Minoan and Mycenaean civilizations. Not open to students who have taken Art 114. C-L: Art History 114. One course. *Younger*

157S. The Individual and Society: The Classical View. (CZ) See C-L: Political Science 150S. One course. *Grant*

161S. Athens. (CZ) The city from antiquity (c. 1500 B.C.) to the present, concentrating on its monuments, self-image, and influence. Not open to students who have taken Art 116S. C-L: Art History 116S. One course. *Younger*

162. Pompeii. (CZ) Contributions of the city to knowledge of ancient Roman life: its history, houses and temples, amusements, and municipal administration. Not open to students who have taken Art 117. C-L: Art History 117. One course. *Richardson*

180. Special Topics in Classical Studies. Topics to be announced. One course. *Staff*

183. Etruscan Art and Architecture. (AL) Not open to students who have taken Art 183. See C-L: Art History 183. One course. *Cormack*

195S, 196S. Junior-Senior Seminars in Classical Studies. (CZ) Specific aspects of the history, art, and literature of classical Greece and Rome. Open only to qualified juniors and seniors; some knowledge of classical studies and history desirable, but not strictly necessary. One course each. *Staff*

203. Ancient Political Philosophy. (SS) See C-L: Political Science 223. One course. *Gillespie or Grant*

211S. Plato. (CZ) Selected dialogues. C-L: Philosophy 211S. One course. *Ferejohn*

217S. Aristotle. (CZ) Selected topics. C-L: Philosophy 217S. One course. *Ferejohn*

220S. Topics in Greek Art. (AL) Consent of instructor required. Not open to students who have taken Art 201S. See C-L: Art History 201S. One course. *Cormack*

222. Fifth and Fourth Century Greece. (CZ) From the Persian Wars to the dominance of Philip of Macedon. C-L: History 260. One course. *Oates or Rigsby*

224. The Roman Republic. (CZ) The rise of Rome, to its mastery of the Mediterranean; the political, social, and intellectual consequences. C-L: History 263. One course. *Boatwright or Rigsby*

225. The Roman Empire. (CZ) The foundation, consolidation, and transformation of Roman rule from Augustus to Diocletian. C-L: History 264. One course. *Boatwright*

227S. Topics in Roman Art. (AL) Consent of instructor required. Not open to students who have taken Art 202S. See C-L: Art History 202S. One course. *Cormack*

230S. Topics in Early Christian and Byzantine Art. (AL) Consent of instructor required. Not open to students who have taken Art 233S. See C-L: Art History 233S; also C-L: Medieval and Renaissance Studies and Religion 275S. One course. *Wharton*

231S. Greek Sculpture. (AL) Free standing, relief, and architectural sculpture from the archaic period to the Hellenistic age, representing changing aesthetic, social, and political aims. Not open to students who have taken Art 238S. C-L: Art History 238S. One course. *Younger*

232S. Greek Painting. (AL) From the Late Bronze Age to the fourth century B.C., with emphasis on archaic and classical Athenian vase painters. Not open to students who have taken Art 237S. C-L: Art History 237S. One course. *Stanley*

236S. Roman Painting. (AL) The techniques, iconography, and use in decoration. Not open to students who have taken Art 227S. C-L: Art History 227S. One course. *Richardson*

258. The Hellenistic and Roman East. (CZ) The social and cultural history of the Greco-Roman world, concentrating on papyrological evidence. Prerequisites: knowledge of ancient Greek and Latin. One course. *Oates*

Courses offered each year on demand in consultation with the director of undergraduate studies:

191, 192. Independent Study. Directed reading and research. Open only to qualified juniors and seniors. One course each. *Staff*

193, 194. Honors Research in Classical Studies. Research culminating in the writing of one longer or two shorter papers as partial fulfillment of the requirements for graduation with distinction. Open only to senior majors. One course each. *Staff*

Courses Currently Unscheduled

- 103. Religion in Greece and Rome. (CZ)
- 105. Ancient and Medieval Epic. (AL)
- 129. The Age of Justinian. (AL)
- 131. Art of the Early Middle Ages. (AL)
- 135. Alexander the Great. (CZ)
- 137. Roman and Non-Roman in Ancient Italy. (CZ)
- 171. Ancient Cosmology. (CZ)
- 221. Archaic Greece. (CZ)
- 223. Alexander and the Hellenistic World. (CZ)
- 226. Late Antiquity. (CZ)
- 233S. Greek Architecture. (AL)
- 235S. Roman Architecture. (AL)

THE MAJOR

Students may major in classical languages and classical studies. Those contemplating graduate study in classics or related disciplines should consider completion of three college years of one ancient language and two years of the other, or equivalents, as a minimum. They are also reminded that reading knowledge of German and French is a requirement for advanced degrees in this field.

Majors are eligible for nomination to one semester of study, typically during the junior year, at the Intercollegiate Center for Classical Studies in Rome, of which Duke is a founding member, or at the College Year in Athens. Courses in Greek, Latin, ancient history, and archaeology taken at these institutions are counted toward major requirements. The cost of a semester at either institution is comparable to that of Duke. Financial assistance usually can be transferred, and arrangements are made through the university. For students not able

to spend a semester abroad, Duke regularly offers summer programs in Greece and Italy. The department also facilitates participation in archaeological digs in Greece and Italy. For further information on opportunities for study abroad, see the section on Off Campus Opportunities in this bulletin.

Classical Studies (Ancient History, Civilization, Literature, Archaeology)

Prerequisites. Classical Studies 11S or 53 and 12S or 54.

Major Requirements. Eight classical studies courses at or above the 100 level, including Classical Studies 195S or 196S; courses must be in at least three separate areas (literature, in translation or in the original language at or above the 100 level; history; philosophy; art and archaeology). For double majors in classical studies and classical languages, no more than two courses in Greek and/or Latin may be counted toward both majors.

Classical Languages (Greek and Latin)

Major Requirements. Minimum of ten courses, of which eight must be at the 100-level or above. Knowledge of both Greek and Latin through the second-year level (Greek 64 and Latin 64 or the equivalent), with a total of at least eight courses in Greek and/or Latin, of which at least six will be at or above the 100-level; two courses in classical studies at or above the 100-level, one of which will be the capstone course (Classical Studies 195S or 196S). For double majors in classical languages and classical studies, no more than two courses in Greek and/or Latin may be counted toward both majors.

Honors/Distinction

The department offers work leading to graduation with distinction. See the section on honors in this bulletin and the departmental director of undergraduate studies.

THE MINOR

Four minors are offered by the department, as listed below. No courses used to fulfill the requirements of one minor may be used for another, or for the majors in classical languages or classical studies.

Classical Archaeology

Requirements. Five courses in ancient art and archaeology, at least three at the 100 level or above, and at least three in the Classical Studies Department.

Classical Civilization

Requirements. Five courses in the Classical Studies Department, at least three at the 100 level or above; the courses must be in at least two areas (literature in the original language at the 100 level or above or in translation; history; philosophy; art and archaeology).

Greek

Requirements. Five courses in ancient Greek, at least three at the 100 level or above.

Latin

Requirements. Five courses in Latin, at least three at the 100 level or above.

Comparative Area Studies (CST)

Professor Lawrence, *Director*

A major or minor is available in this program.

The undergraduate major in comparative area studies offers a Bachelor of Arts degree to students interested in the interdisciplinary study of societies and cultures of two particular regions of the world. Students complement their primary concentration with work in a second world area and the comparative study of international themes or problems. The major allows a student to combine language study with courses in a variety of disciplines. As in area studies programs elsewhere, the result is a sustained focus on a single world area tailored to fit the student's interest. Comparative area studies at Duke, however, is distinct from other area studies programs in several respects. The primary concentration encourages study in the social sciences and humanities as well as analysis of their social, historical, economic, and political roots and problems. The secondary concentration imparts breadth of focus and a cross-regional perspective to the course of study, while the required course on comparative methods ensures an analytic perspective that is multidisciplinary as well as global.

Students in the program are currently studying Latin America, North America, Africa, the Middle East, Russia, South Asia, East Asia, and Eastern and Western Europe. Many comparative area studies majors double-major in comparative area studies and in such fields as art history, cultural anthropology, history, political science, Spanish, and French. The program is unique in that it conjoins the social sciences and humanities. It is specifically designed for those with career objectives in academia, government (especially the Foreign Service), international business, international law, health and environmental programs, the United Nations and international agencies, and private international religious or service organizations.

The major draws its offerings from courses taught by over 130 Duke professors in fourteen cooperating departments. Interdisciplinary and intercultural courses have been designed specifically for majors in the program to help place those societies chosen for specialization in a broad comparative and global perspective. These courses stress the interrelationship of developed and underdeveloped societies and probe the difficulties and advantages of comparative, interdisciplinary, and intercultural research. The program is administered by its director and an advisory committee representing the various areas and cooperating departments.

Advising. Students must identify the area of their primary concentration. Faculty members with expertise in each area are available to provide advice concerning selection of an area and appropriate course work in the major. Selection of area is normally done by the end of the sophomore year. The program tries to foster close relationships between faculty and students working in similar areas.

Study Abroad or on Another Campus. The program encourages qualified and interested students to engage in sustained study abroad in their chosen area for a semester or for an academic year. Up to three courses taken in a non-Duke semester abroad program may be counted toward the requirements in the major. Duke students are eligible for a variety of programs now operating in Africa, Asia, Canada, Latin America, Russia, and Eastern and Western Europe. Students can also take advantage of internship programs with international agencies. Occasionally summer internships become available for qualified students.

Grants and Awards. At the initiative of the Center for International Studies, a program of grants and awards for majors has been instituted. A competition is held in the fall to select a small group of upperclass majors to organize a scholarly symposium on a comparative/global issue during the spring semester. Summer stipends for travel and research abroad are also offered to selected rising senior majors planning to enroll in the honors seminar. The author of the best research paper submitted to the honors seminar is recognized by an award for excellence in comparative analysis.

The courses listed on the following pages meet requirements for the major as introductory courses, area courses, and comparative/global issue courses. Basic language courses and courses at the 100 and 200 level taught in the foreign language satisfy the foreign language corequisite; such courses are not listed. Only advanced language and literature courses meeting requirements for specific areas of the major are listed below. Selected

non-listed upper level and seminar courses offered by various departments and programs (including Comparative Area Studies 140 and Comparative Area Studies 200S), the topics of which vary from semester to semester, may also be included if the topics covered fall within a particular area or focus on comparative/global issues. To determine if specific courses meet requirements for the major, consult the director. To meet the general studies requirement of Program I, courses in the major from only two areas of knowledge may be counted. For a complete description of each course, including cross-listings, consult the listing in the Duke University bulletin under the appropriate department or program.

COMPARATIVE AREA STUDIES COURSES

109. Contemporary Global Issues. (SS) Nature of important global phenomena and conditions and their manifestations in diverse regions and societies. Includes such questions as what is progress? Are nation-states obsolete? How are we managing an interdependent world economy and a fragile global environment? C-L: Cultural Anthropology 109, History 109, Political Science 160, and Sociology 175. One course. *Staff*

110. Global Human Geography. (SS) World development and modernization through the lenses of geography. Patterns of adaptation by peoples and societies to different physical environments and the changing world economy. One course. *Lewis*

125. Comparative Approaches to Global Issues. (SS) Comparative research and analysis in the social sciences and the humanities: strengths and weaknesses of cross-cultural comparison as developed by sociologists, historians, political scientists, anthropologists, and specialists in comparative literature and religion. Not open to students who have taken Religion 121. C-L: Cultural Anthropology 125, History 137, Political Science 125, Religion 183, and Sociology 125. One course. *Staff*

140. Selected Topics in Comparative Area Studies. Topics vary from semester to semester, focusing either on specific world regions or particular comparative/global issues. One course. *Staff*

150S. Comparative Area Studies Honors Seminar. (CZ) Open to seniors majoring in Comparative Area Studies. Consent of instructor required. One course. *Staff*

200S. Advanced Topics in Comparative Area Studies. Topics vary, focusing either on specific world regions or particular comparative/global issues. One course. *Staff*

INTRODUCTORY COURSES

Comparative Area Studies 109. Contemporary Global Issues. *Staff*
Comparative Area Studies 110. Global Human Geography. *Lewis*
Cultural Anthropology 94. Introduction to Cultural Anthropology. *Staff*
History 75, 76. The Third World and the West. *Staff*
Literature 98. Introduction to the Study of Literature and Society. *Lentricchia or Willis*
Music 136. Introduction to World Music. *Meintjes*
Political Science 92. Comparative Politics. *Archer*
Religion 45. Religions of Asia. *Cornell, Lawrence, Nickerson or staff*

COMPARATIVE/GLOBAL ISSUES COURSES

Art and Art History

168. Art since 1945: Modernism or Postmodernism. *Stiles*
169. Documentary Photography and Social Activism in the Nuclear Age. *Stiles*
179. The History of Performance Art. *Stiles*

Asian and African Languages and Literature

121. Introduction to Asian and African Literature. *Staff*
190. Women in Islam: Fact and Fiction. *Cooke*

Cultural Anthropology

108. Fantasy, Mass Media, and Popular Culture. *Allison*

- 110. Advertising and Society: Global Perspective. *Luttrell, O'Barr, J. Smith, or Wilson*
- 117. Global Culture. *Piot*
- 119. Language, Culture, and Society. *Apte, O'Barr, or Strauss*
- 126. Muslim World: Transformations and Continuities. *Ewing*
- 142. Sexuality in Global Perspective. *Luttrell*
- 190. Theoretical Foundations of Cultural Anthropology. *Staff*

Economics

- 140. Comparative Economic Systems. *Trembl*
- 219S. Economic Problems of Underdeveloped Areas. *Kelley or Wallace*
- 240. Comparative Economic Systems. *Trembl*

History

- 101C. Terrorism, 1848-1968. *M. Miller*
- 112A. The World in the Twentieth Century, 1900-1945. *Cell*
- 112B. The World in the Twentieth Century, 1945 to the Present. *Cell*
- 114B. Immigration, Migration, and Mobility of Labor: United States and the World. *Keyssar*
- 120. History of Socialism and Communism. *Lerner*
- 123S. Madness and Society in Historical Perspective. *M. Miller*
- 132. Modern World Environmental History, 1500 to the Present. *Richards*
- 158A. New Perspectives on the Atlantic World. *Ewald*
- 168S. The Atlantic Slave Trade. *Gaspar*
- 225S. Problems in Comparative Labor History. *French or Keyssar*
- 233S. Slave Resistance and Social Control in New World Societies. *Gaspar*
- 239. History of Socialism and Communism. *Lerner*

Literature

- 123. Special Topics in Women Writers. *Staff*
- 141. International Popular Culture. *C. Davidson, Gaines, Radway, or Willis*

Political Science

- 100K.01. Anglo-American Constitutionalism, Law, and Legal Institutions. (Taught in England.)

Staff

- 100L.02. Law and Liability: Personal Injury in Britain and the United States. (Taught in England.)

Staff

- 107. Environmental Politics and Policies in the Industrial World. *McKean*
- 147. Environmental Politics and Policies in the Developing World. *McKean or Miranda*
- 148D. Environmental Politics Beyond Borders. *McKean*
- 153, 154. Politics and the Media of Mass Communication. *Paletz*
- 155. The Politics and Economics of Developing Areas. *Staff*
- 173S. Political Economy of World Food Problems. *Johns*
- 176A. Perspectives on Food and Hunger. *Johns*
- 176B. Perspectives on Food and Hunger. *Johns*
- 231S. Crisis, Choice, and Change in Advanced Democratic States. *Kitschelt*
- 262S. Transition from Classic Communism. *Hough*
- 277. Comparative Party Politics. *Lange*

Public Policy Studies

- 266. Comparative Social Policy. *Staff*
- 284S. Public Policy Process in Developing Countries. *Ascher*
- 286S. Economic Policy-Making in Developing Countries. *Conrad or Ramachandran*

Religion

- 103. Islam in East and Southeast Asia. *Cornell*
- 112. Muslim Minorities in Society: From Asia to America. *Cornell and Lawrence*
- 150. Mysticism. *Staff*

Russian

- 155. The Interaction of Russian and American Culture. *Lahusen and Van Tuyl*

Sociology

- 110E. Comparative Sociology: Cross-Regional. *Gereffi*
- 118. Sex, Gender, and Society. *Buchanan or O'Rand*
- 126. Third World Development. *Gereffi or Parnell*
- 142. Organizations and Global Competitiveness. *Buchanan or Gereffi*
- 143. Management and Labor Relations. *Gereffi or Thornton*
- 145. Nations, Regions, and the Global Economy. *Gereffi or Shanahan*
- 170. Mass Media. *Smith*
- 171. Comparative Health Care Systems. *Boyчук*
- 179. Modern Nationalist Movements. *Tiryakian*
- 182. Media in Comparative Perspective. *Smith*

214. Comparative and Historical Methods. *Gereffi, Lin, Smith, or Tiryakian*
 222S. B. Proseminars in Comparative and Historical Sociology: Globalization and Comparative Development. *Gereffi, Lin, Simpson, Smith, or Tiryakian*
 222S. D. Proseminars in Comparative and Historical Sociology: Culture, Values, and Ideas. *Gereffi, Lin, Simpson, Smith, or Tiryakian*
 227S. C. Proseminar in Medical Sociology: Organization and Financing of Health Care. *George, Gold, Jackson, Line, Mad, Thornton, or Weinberger*

AREA COURSES: AFRICA

Art and Art History

174. Art and Philosophy from West Africa to the Black Americas. *Power*

Asian and African Languages and Literature

174. North African Literature in Translation. *Charge*

Cultural Anthropology

122. Culture and Politics in Africa. *Piot*

History

- 115A. History of Africa: From Antiquity to Early Modern Times. *El Hamel or Ewald*
 115B. History of Africa: From Early Modern Times to Independence. *El Hamel or Ewald*
 168S. The Atlantic Slave Trade. *Jasper*
 179. History of South Africa, 1600-1960. *Ewald*

Political Science

- 100C.01. Politics and Literature in Southern Africa. (Taught in Africa.) *Johns*
 100C.02. Issues of Development and Dependence in Botswana and Zimbabwe. (Taught in Africa.) *Johns*
 171. From Apartheid to Democracy in South Africa. *Johns*

Sociology

- 110A. Comparative Sociology: Africa. *Gao, Greece, In, Dyers, Smith, or Tiryakian*

AREA COURSES: EAST ASIA

Art and Art History

164. Early Chinese Art. *Abe*
 170. Chinese Buddhist Art. *Abe*
 171. Chinese Painting. *Abe*
 172. Topics in Asian Art. *Abe*
 272S. Topics in Chinese Art. *Abe*

Asian and African Languages and Literature

- 141S. The Fantastic in Chinese Fiction in Translation. *Wang*
 148S. Literature and Revolution: From the May Fourth to the Post-Mao Era. *Wang*
 149. Women and Modernity: Gender Issues in Twentieth-century Chinese Literature and Film. *Torgeson*
 162. Special Topics in Japanese Culture and Literature. *Ching or Yoga*
 163. Korean Literature in Translation. *Staff*
 165S. Modern Arabic Literature in Translation. *Staff*
 170. *The I Change, or Book of Changes*. *Staff*
 182S. The Forbidden Books: Issues of Censorship in China. *Wang*

Chinese

- 183S, 184S. Topics in Modern Chinese. *Staff*
 Additional Chinese courses are taught in Beijing and Nanjing as part of the Duke Study in China Program.

Cultural Anthropology

163. Foundations of Chinese Civilization. (Taught in China.) *Staff*

Economics

- 134/234. Japanese Economy and Its History. *Bronfenbrenner*
 142S/242S. Chinese Economy in Transition. *Yang*

History

- 100J. Foundations of Chinese Civilization. (Taught in China.) *Staff*
 101K. Topics in Chinese Civilization. *Dirlik*
 101M. Asian-Pacific Region in Historical Perspective. *Dirlik*
 142A. China: Roots of Revolution. *Dirlik or Mazumdar*

- 142B. China since 1949: The People's Republic. *Dirlik or Mazumdar*
- 143A. Ancient and Early Modern Japan. *Wigen*
- 143B. The Emergence of Modern Japan. *Wigen*

Japanese

- 183S, 184S. Topics in Japanese. *Ching*

Korean

- 183, 184. Topics in Korean. *Staff*

Political Science

- 111. Contemporary Japanese Politics. *McKean*
- 132. Politics of Asia. *Staff*
- 133. Japanese Foreign Relations. *McKean*

Religion

- 218. Religions of East Asia. *Corless*

Sociology

- 110B. Comparative Sociology: Asia. *Lin*

AREA COURSES: EASTERN EUROPE

History

- 110. History of Eastern Europe in Modern Times. *Lerner*
- 120. History of Socialism and Communism. *Lerner*
- 239S. History of Socialism and Communism. *Lerner*

Polish

- 187. Introduction to Polish Literature. *Lahusen*

Political Science

- 105. The Politics of Democratization in Eastern Europe. *Kitschelt*

Russian

- 163. Literature of the Former Soviet Republics. *Dobrenko*
- 201S,A. Topics in Comparative Slavic Linguistics: East Slavic. *Andrews*
- 201S,B. Topics in Comparative Slavic Linguistics: West Slavic. *Andrews*
- 201S,C. Topics in Comparative Slavic Linguistics: South Slavic. *Andrews*
- 201S,D. Topics in Comparative Slavic Linguistics: Common Slavic. *Andrews*

AREA COURSES: LATIN AMERICA

Art and Art History

- 195. Pre-Columbian Art and Culture of Andean South America. *Reents-Budet*
- 257S. Topics in Pre-Columbian Art and Culture. *Reents-Budet*

History

- 136A. Introduction to Contemporary Latin American Reality. *James*
- 136B. Biography and Politics in Latin America. *James*
- 136C. Nineteenth-Century Latin America: Building Postcolonial Nations. *Staff*
- 173. History of Spain from Late Medieval Times to the Present. *TePaske*
- 174B. Modern Latin America. *Staff*
- 230S. Populism in Latin America. *James*

Latin American Studies

- 198S. Current Topics on Latin America. *Staff*

Political Science

- 151. Introduction to Latin-American Politics. *Archer*
- 253S. Comparative Government and the Study of Latin America. *Archer*

Portuguese

- 111S. Portuguese for Current Affairs. *Damasceno*
- 200S. Seminar in Portuguese Literature. *Damasceno*

Romance Studies

- 124. Modernity, Ethnicity and Colonization. *Mignolo and staff*

Sociology

- 110D. Comparative Sociology: Latin America. *Gereffi*

Spanish

- 115, 116. Introduction to Spanish-American Literature. *Staff*
- 121. Latin American Literature in Translation. *Dorfinan*
- 140E,S. Cultural Diversity in the Andes (Taught in Bolivia). *Staff*
- 143S. Literature of the Discovery and Conquest of America. *Staff*
- 144S. Spanish-American Literature of Identity. *Pérez Firmat*
- 145S. Literature of the Hispanic Minorities of the United States. *Pérez Firmat*
- 146. The Spanish-American Novel. *Moreiras or staff*
- 147S. Latin American Women Writers. *Staff*
- 175S. Hispanic Literature and Popular Culture. *Sieburth*
- 210. History of the Spanish Language. *Garci-Gómez*
- 245. Latin-American Poetry. *Moreiras or staff*

AREA COURSES: MIDDLE EAST

Arabic

- 125, 126. Advanced Arabic. *Cooke*
- 183S,184S. Topics in Arabic. *Cooke*

Asian and African Languages and Literature

- 165S. Modern Arabic Literature in Translation. *Staff*
- 173S. Women in Arabic Literature. *Cooke*
- 174. North African Literature in Translation. *Chergui*
- 195. Women in the Middle East. *Cooke*

Cultural Anthropology

- 126. Muslim World: Transformation and Continuities. *Ewing*

History

- 152. The Modern Middle East. *Y. Miller*

Public Policy Studies

- 175S. The Palestine Problem and United States Public Policy. *Kuniholm*
- 257. United States Policy in the Middle East. *Kuniholm*

Religion

- 134. Jewish Mysticism. *Bland*
- 136. Contemporary Jewish Thought. *Bland or E. Meyers*
- 146,147. Introduction to Islamic Civilization. *Cornell, Lawrence, and staff*
- 152A. Islamic Mysticism: Arabic (Western) Traditions. *Cornell*
- 284. The Religion and History of Islam. *Cornell or Lawrence*

AREA COURSES: NORTH AMERICA

Art and Art History

- 174. Art and Philosophy from West Africa to the Black Americas. *Powell*

Canadian Studies

- 98. Introduction to Canada. *Thompson*
- 184S. Canadian Issues. *Staff*
- 185S. The Canadian Health Care System. *Warren or staff*
- 282S. Canada. *Staff*

Cultural Anthropology

- 124. American Indian Peoples. *Staff*

English

- 179S. Repairing the Continent: Canadian and U.S. Literary Perspectives. *A. Davidson*
- 186A, S. Canadian Literature in English. *A. Davidson*
- 186B, S. Canadian Theater. *Staff*

French

- 169. The Contemporary Novel in French Canada. *Keineg*

History

- 108C. Canadian-American Relations. *Thompson*
- 119A, 119B. Native American History. *Wood*
- 121A. America in International Affairs, 1607-1861. *Staff*
- 124S. Slave Society in Colonial Anglo-America: The West Indies, South Carolina and Virginia.

Gaspar

- 131B. The Spanish Caribbean. *TePaske*

- 145A,B. African-American History. *Gavins*
- 168S. The Atlantic Slave Trade. *Gaspar*
- 183S. Canada from the French Settlement. *Thompson*
- 206. Origins of Afro-America. *Staff*
- 216S. U.S. Diplomacy, 1890-1945. *Staff*
- 233S. Slave Resistance and Social Control in New World Societies. *Gaspar*

Literature

- 163. The Canadian Image: Cultural Production in French and English Canada. *A. Davidson*

North American Studies

- 110. Introduction to North America. *Staff*

Political Science

- 203S. Issues and Politics and the Media in the United States. *Paletz*
- 277. Comparative Party Politics. *Lange*

Public Policy Studies

- 266. Comparative Social Policies. *Staff*

Romance Studies

- 124. Modernity, Ethnicity, and Colonization. *Mignolo and staff*

Spanish

- 115, 116. Introduction to Spanish-American Literature. *Staff*
- 143S. Literature of the Discovery and Conquest of America. *Staff*
- 145S. Literature of the Hispanic Minorities of the United States. *Pérez Firmat*
- 146. The Spanish-American Novel. *Moreiras or staff*
- 245. Modern Latin-American Poetry. *Moreiras or staff*

AREA COURSES: RUSSIA

Economics

- 293S. Soviet Economic History. *Trembl*
- 294S. Soviet Economic System. *Trembl*

History

- 120. History of Socialism and Communism. *Lerner*
- 161. History of Modern Russia. *M. Miller*
- 180. The Soviet Experience. *Lerner*
- 201S. The Russian Intelligentsia and the Origins of the Revolution. *M. Miller*
- 202S. The Russian Revolution. *M. Miller*
- 239. History of Socialism and Communism. *Lerner*
- 262. The Soviet Experience. *Lerner*

Political Science

- 165. Politics and Foreign Policy of Russia. *Hough*

Russian

- 103S, 104S. Studies in Russian Language and Culture. (Taught in Russia.) *Staff*
- 129. Russian Orthodoxy. *Pelech*
- 130. Soviet Cinema. *Gaines, Jameson, and Lahusen*
- 131. Language, Culture, and Myth: The Slavic Proverb. *Staff*
- 135. Contemporary Russian Media. *Andrews*
- 135A. Contemporary Russian Media. (Taught in Russia.) *Staff*
- 149S. Russian Culture in the Era of Terror: A Reexamination. *Lahusen*
- 155. Special Topics in Russian and American Culture. *Lahusen and Van Tuyl*
- 159. Women's Autobiographies in European Context: Telling the Self in Russia, France and Britain.

Gheith

- 161, 162. Masterpieces of Nineteenth-Century Russian Literature I and II. *Staff*
- 168S. Russian Classical Literature and Music. *Dobrenko*
- 169. Women and Russian Literature. *Gheith*
- 170. Russian Dissident and Emigré Literature. *Lahusen*
- 173S. Gogol. *Lahusen*
- 175. Tolstoy. *Van Tuyl*
- 176. Dostoevsky. *Flath, Gheith, or Van Tuyl*
- 177S. Chekhov. *Flath and staff*
- 178A. Russian Short Fiction. *Gheith*
- 178B. Russian Short Fiction in the Original. *Gheith*
- 180. Early Twentieth-Century Russian Literature: From Symbolism to the 1920s. *Lahusen or staff*
- 181. The Soviet 1920s: The Road to a New Synthesis. *Dobrenko or Lahusen*

- 182. Socialist Realism: Soviet Literature of the 1930s and 1940s. *Dobrenko or Lahusen*
- 185S. Introduction to Slavic Linguistics. *Andrews*
- 186S. History of the Russian Language. *Staff*
- 190. Introduction to Russian Civilization. *Pelech*
- 195. Advanced Russian. *Andrews*
- 196. Advanced Russian: Readings, Translation, and Syntax. *Andrews*
- 201S,A. Topics in Comparative Slavic Linguistics: East Slavic. *Andrews*
- 201S,B. Topics in Comparative Slavic Linguistics: West Slavic. *Andrews*
- 201S,C. Topics in Comparative Slavic Linguistics: South Slavic. *Andrews*
- 201S,D. Topics in Comparative Slavic Linguistics: Common Slavic. *Andrews*
- 261,262. Masterpieces of Nineteenth-Century Russian Literature I and II. *Staff*
- 269. Women and Russian Literature. *Gheith*

AREA COURSES: SOUTH ASIA

Asian and African Languages and Literature

- 137. Contemporary Culture in South Asia. *Khanna*
- 138. The Media in Modern India. (Taught in India.) *Khanna*
- 160, 161. Introduction to the Civilizations of Southern Asia. *Khanna*

Cultural Anthropology

- 120. South Asia: Institutions and Change. *Apte or Ewing*

History

- 100E. Indian History and the Present. (Taught in India.) *Kumar*
- 164. India, Pakistan, and Bangladesh: 1750 to the Present. *Richards*
- 248. History of Modern India and Pakistan: 1857 to the Present. *Richards*

Political Science

- 132. Politics of Asia. *Staff*

Religion

- 217. Islam in India. *Lawrence*
- 146,147. Introduction to Islamic Civilization. *Cornell, Lawrence, and staff*
- 152A. Islamic Mysticism: Arabic (Western) Traditions. *Cornell*
- 152B. Islamic Mysticism: Perso-Indian (Eastern) Traditions. *Lawrence*

AREA COURSES: WESTERN EUROPE

Art and Art History

- 152. Art of the Netherlands in the Sixteenth Century. *Van Miegroet*
- 153. Art of the Northern Netherlands in the Seventeenth Century. *Van Miegroet*
- 154. German Art in the Fifteenth and Sixteenth Centuries. *Van Miegroet*
- 155. Mercantile Culture and Art in the Netherlands. *De Marchi and Van Miegroet*
- 158-159. History of Netherlandish Art and Visual Culture in a European Context. (Taught in the Netherlands.) *Van Miegroet*
- 161. Nineteenth-Century Art, 1789-1848: Revolution to Revolution. *Staff*
- 167. Twentieth-Century Art, 1900-1945: The Avant-garde and Modernism. *Stiles*
- 187. Surrealism. *Stiles*

Cultural Anthropology

- 139. Marxism and Society. *Staff*

Distinguished Professor Course

- 192. French Existentialism: 1940-1960. *Mudimbe*

Economics

- 60. Economics of a United Europe. (Taught in Germany.) *Tolksdorf*
- 148. History of Economic Thought (Taught in Holland.) *De Marchi or Goodwin*
- 151. Adam Smith and the System of Natural Liberty. *Staff*

French

- 107S. Contemporary Ideas. *Staff*
- 111S. French for Current Affairs. *Keineg or staff*
- 113S. French for Business. *Staff*
- 137. Aspects of Contemporary French Culture (Taught in France.) *Staff*
- 139. French Civilization. *Keineg or Tetel*
- 145S. Topics in Renaissance Literature and Culture. *Tetel*
- 153. The French Enlightenment. *Stewart*
- 166, 167. Contemporary French Life and Thought. *Kaplan*
- 256. Modern Literature and History. *Kaplan, Orr, or staff*

Germanic Languages and Literature

- 100S. Business German. *Dowell*
- 136S. Contemporary Germany. *Hell*
- 152S. Berlin in Literature and Culture. (Taught in Germany.) *Wolfneil*
- 153. Aspects of Contemporary German Culture. (Taught in Germany.) *Staff*
- 160. German Life and Thought. *Borchardt*
- 245S. The Twentieth Century. *Rolleston*
- 247S. Postwar German Literature. *Hell*
- 270. Consciousness and Modern Society. *Rolleston*

History

- 100A. History of Modern Spain. (Taught in Spain.) *Staff*
- 100B. History of Renaissance Italy. (Taught in Italy.) *Witt or staff*
- 100K. History of Spain from Late Medieval Times to the Present. (Taught in Spain.) *Staff*
- 100L. German History from 1870 to the Present. (Taught in Germany.) *Staff*
- 107A. Tudor/Stuart England. *Herrup*
- 107B. Modern Britain. *Thorne*
- 117. Early Modern Europe. *Neuschel*
- 135B. Germany from 1871 to 1933. *Koonz*
- 135C. Germany from 1933 to 1990. *Koonz*
- 138. Renaissance and Reformation Germany. *Robisheaux*
- 171A. History of Women in Early Modern Europe. *Neuschel*
- 173. History of Spain from Late Medieval Times to the Present. *TePaske*
- 213S. Early Modern France. *Neuschel*
- 214. Class, Public Opinion, and the French Revolution. *Reddy*
- 221. Special Topics in the History of Europe, 1200-1700. *Neuschel or Robisheaux*
- 251B. Topics in the Intellectual History of Europe, 1450, 1650. *Witt*
- 253S, 254S. European Diplomatic History, 1871-1945. *Staff*
- 267S. England in the Sixteenth Century. *Herrup*
- 268S. England in the Seventeenth Century. *Herrup*

Italian

- 105. Italian Women Writers. *Finucci*
- 118S. Italian Literature and Popular Culture. *Finucci or staff*
- 131. Topics in Italian Civilization. *Finucci*
- 155S. Nineteenth-Century Italian Literature. *Caserta*
- 159S. Topics in Sexuality and Gender Studies. *Finucci or staff*
- 170S. Film and the Italian Novel. *Finucci*
- 283. Italian Novel of the Novecento. *Caserta*

Music

- 119. The Humanities and Music. *Bartlet or staff*
- 143. Beethoven and His Time. *Bartlet, Gilliam, Silbiger, or Todd*
- 144. Bach and His Time. *Silbiger*
- 145. Mozart and His Time. *Silbiger*
- 158S. Music History III: After 1850. *Gilliam or Todd*
- 159S. Music History II: From 1650-1850. *Bartlet or Silbiger*

Political Science

- 100A.01. Environmental Policy in Europe. (Taught in Germany.) *Staff*
- 100A.02. Germany of Today: An Ordinary Country? (Taught in Germany.) *Staff*
- 100E.01. Media and Politics in Britain. (Taught in England.) *Staff*
- 100J.01. Government and Politics of Austria in Europe. (Taught in Austria.) *Staff*
- 100K.02. British Government and Constitutional Law. (Taught in England.) *Staff*
- 100L.01. Political System of Modern Britain. (Taught in England.) *Staff*
- 100M.01. Government and Politics of Spain. (Taught in Spain.) *Staff*
- 115. Politics and Society in Germany. *Kitschelt*
- 136. Comparative Government and Politics: Western Europe. *Kitschelt or Lange*
- 170. Europe Transformed. *Grieco*
- 181. Marxism and Neo-Marxism. *Coles*
- 216S. Evolution of European Marxism. *Coles*
- 225. Topics in Comparative Government and Politics: Western Europe. *Kitschelt or Lange*
- 232. Political Economy: Theory and Applications. *Lange*
- 244S. The Politics of the European Community. *Grieco*

Religion

- 158. The Reformation of the Sixteenth Century. *Hillerbrand*

Russian

159. Women's Autobiographies in European Contexts: Telling the Self in Russia, France and Britain. *Gheith*

Sociology

110C. Comparative Sociology: Europe. *Staff*

138D. History of Social Thought. *Tiryakian or Wilson*

Spanish

120S. Contemporary European Issues. *Staff*

137. Aspects of Contemporary Spanish Culture. *Garci-Gómez*

171. Literature of Contemporary Spain. *Vilarós*

210. History of Spanish Language. *Garci-Gómez*

THE MAJOR

Corequisite Foreign Language Requirement. Four (4) semester courses in a single language of the primary area are required. Students with advanced placement credits or other evidence of foreign language proficiency are not exempted from this requirement. However, in the following cases students may substitute one or two nonlanguage courses to meet this requirement: (1) if a second year of a language is not taught at Duke, or (2) if no language course is available at a sufficiently advanced level. In these cases, approved humanities or social science courses taught in a foreign language, or a year of general linguistics or literature in translation, may be substituted for the second year of a language. The specific language courses are too numerous to list here. Area advisors should be consulted for specific approval of the language choice if it does not conform to the list below.

Africa: Swahili; Arabic; relevant European language, such as French or Portuguese, may be used if appropriate to specific programs.

East Asia: Chinese, Japanese.

Eastern Europe: Relevant Eastern Europe language, such as Polish or Estonian.

Latin America: Spanish; Portuguese for specialization in Brazil.

Middle East: Arabic, Persian; modern Hebrew for specialization in Israel.

North America: French or Spanish.

Russia: Russian.

South Asia: Hindi-Urdu.

Western Europe: French, German, Italian, Portuguese, Spanish.

Major Requirements.

1. **Introductory Courses:** Two (2) introductory courses emphasizing comparative approaches from two different departments. One of these courses must be Comparative Area Studies 110, Global Human Geography. See list above for other introductory courses.
2. **Primary Area Courses:** Four (4) semester courses in the geographical area of special interest (the area of the language studied), with strong commendation for multidisciplinary course selection. Areas and courses are listed above. Others may be selected with the consent of the director.
3. **Secondary Concentration:** The secondary concentration must be in another geographic area. Students must take two (2). Qualifying courses are listed above.
4. **Two (2) Comparative/Global Issues Courses.** To satisfy the comparative/global issue requirements of the major, each student must elect one comparative/global issue course and also take Comparative Area Studies 125, Comparative Approach to Global Issues. Comparative Area Studies 125 will be coordinated by faculty members affiliated with comparative area studies, but will also include guest lectures. The purpose of this course is to teach students the various strategies that can be employed in making appropriate comparisons within and across distinct regions of the world. The course will offer a lecture/discussion format, and students will be asked to write a series of brief papers that reflect the

cross-cultural and interdisciplinary objectives of the major. Normally, students should take this course in their sophomore or junior year, not in their senior year.

Honors Seminar. For graduation with distinction, the student must complete a research project in the senior year, in the Comparative Area Studies 150S senior seminar. Candidates must apply in their junior year. Selection criteria will include both the feasibility of the proposed topic, and the student's ability and skills to carry it out successfully. Inquiries should be addressed to the Director, Comparative Area Studies, 107E. West Duke Building.

THE MINOR

Corequisite. Two courses in a foreign language appropriate to the primary geographic area.

Requirements. Five courses, at least three of which must be at the 100-level or above, and including Comparative Area Studies 110 (Global Human Geography), Comparative Area Studies 125 (Comparative Approaches to Global Issues), two courses in a primary geographic area, one course in a secondary geographic concentration.

Computer Science (CPS)

Professor Vitter, *Chair*; Associate Professor of the Practice Ramm, *Associate Chair*; Associate Professor of the Practice Astrachan, *Director of Undergraduate Studies*; Professors Behringer, Biermann, Gelenbe, Loveland, Marinos, Palmer, Reif, Rose, Starmen, Trivedi, and Utku; Associate Professors Agarwal, Board, Ellis, Greenside, Kao, Kadem, and Wagner; Assistant Professors Chase, Lebeck, Littman, Prisant and Sun; Professors Emeriti Gallie and Patrick; Assistant Professor of the Practice Rodger; Assistant Research Professor Arge; Adjunct Professors Coughran and Whitted; Adjunct Associate Professor Brglez; Adjunct Assistant Professors Markas and Narten

A major or a minor is available in this department.

The Department of Computer Science provides courses on the concepts of computing and computers, their capabilities, and uses. In most courses students make extensive use of the available computing facilities. Students who wish to take a single introductory course, as part of their general education, usually elect either Computer Science 1 or 6.

In cooperation with the Microelectronics Center of North Carolina (MCNC), the University of North Carolina at Chapel Hill, and other MCNC-affiliated universities in North Carolina, the department often sponsors advanced computer science and other high technology courses originating at other universities. These are available through a closed circuit television and data network belonging to MCNC. Contact the Department of Computer Science for further information on the availability of such courses.

1. Computer Science Fundamentals. (QR) An overview for students not intending to major in computer science. Computer programming, symbolic and numeric computation, electric circuits, architectures, translation, time complexity, noncomputability, and artificial intelligence. Not open to students having credit for Computer Science 6 or higher. Not open to students who have taken Computer Science 10. One course. *Biermann and staff*

4. Introduction to Pascal Programming. (QR) A study of clear thinking and problem solving using the computer. Representation, problem decomposition, and structured programming. Students learn the Pascal language and develop skills by solving a variety of symbolic and numerical problems. Not open to students who have taken Computer Science 50. One course. *Staff*

6. Introduction to Program Design and Analysis I. (QR) Problem-solving techniques using a computer, top-down decomposition and object-oriented solution methodologies, introduction to programming, programming in the C/C++ language, introduction to UNIX and programming environments, recursion, analysis of execution times, linked data struc-

tures, searching, and sorting. Normally the first course for majors in computer science who have no programming experience. Not open to students who have taken Computer Science 8, 52, or 53. One course. *Astrachan or Rodger*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

100. Program Design and Analysis II. (QR) A continuation of Computer Science 6 or 8. Overview of advanced data structures and analysis of algorithms, data abstraction and abstract data types, object-oriented programming, proofs of correctness, complexity, and computability. Not open to students who have taken Computer Science 103. Prerequisite: Computer Science 6, 8, 52, or 53. One course. *Astrachan or Rodger*

100E. Program Design and Analysis II. (QR) Same as Computer Science 100, except designed for students with considerable programming background who have not taken Computer Science 6 or Computer Science 8. Overview of advanced data structures and analysis of algorithms, data abstraction and abstract data types, object-oriented programming, proofs of correctness, complexity, and computability. One course. *Staff*

104. Computer Organization and Programming. (QR) Computer structure, machine language, instruction execution, addressing techniques, and digital representation of data. Computer systems organization, logic design, microprogramming, and interpreters. Symbolic coding and assembly systems. Prerequisite: Computer Science 100 or 103 or consent of instructor. One course. *Ramm and staff*

106. Programming Languages. (QR) Syntax and semantics of programming languages. Compilation, interpretation, and programming environments; including programming languages such as Algol, PL/1, Pascal, APL, LISP, and Prolog. Exercises in programming. Prerequisite: Computer Science 104. One course. *Staff*

108. Software Design and Implementation. (QR) Techniques for design and construction of reliable, maintainable and useful software systems. Programming paradigms and tools for medium to large projects: revision control, UNIX tools, performance analysis, GUI, software engineering, testing, documentation. Prerequisite: Computer Science 100 or 103. One course. *Astrachan*

109. Program Design and Construction. (QR) Substantial programs. Design specifications, choice of data structures, estimation of programming effort, stepwise development, and program-testing methodology. Programming teams and human factors in system implementation. Advanced topics in use of a procedural language and file management. Not open to students who have taken Computer Science 155. Prerequisite: Computer Science 104. One course. *Staff*

110. Introduction to Operating Systems. (QR) Basic concepts and principles of multiprogrammed operating systems. Processes, interprocess communication, CPU scheduling, mutual exclusion, deadlocks, memory management, I/O devices, file systems, protection mechanisms. Not open to students who have taken Computer Science 131. Prerequisites: Computer Science 100 or 103 and 104. One course. *Staff*

120L. Introduction to Switching Theory and Logic Design. (QR) Not open to students who have taken Computer Science 157. See C-L: Electrical Engineering 151L. One course. *Marinos*

130. Introduction to the Design and Analysis of Algorithms. (QR) Design and analysis of efficient algorithms for sorting, searching, dynamic structure manipulation, pathfinding, fast multiplication, and others; nondeterministic algorithms and computationally hard problems. Not open to students who have taken Computer Science 174. Prerequisites: Computer Science 100 or equivalent and four semesters of college mathematics. One course. *Staff*

140. Mathematical Foundations of Computer Science. (QR) An introduction to theoretical computer science including studies of abstract machines, the language hierarchy from regular sets to recursively enumerable sets, noncomputability, and complexity theory. Not open to students who have taken Computer Science 125. Prerequisites: Computer Science 8 or 53 and 100 or 103 and Mathematics 103. One course. *Loveland*

148. Logic and Its Applications. (QR) Prerequisite: a course in logic or consent of instructor. See C-L: Mathematics 188; also C-L: Philosophy 150. One course. *Staff*

149S. Problem Solving Seminar. (QR) Techniques for attacking, solving, and writing computer programs for challenging computational problems. Algorithmic and programming language tool kits. Course may be repeated. Consent of instructor required. Half course. *Staff*

150. Introduction to Numerical Methods and Analysis. (QR) Theory, algorithms, and software that concern numerical solution of linear equations, approximation and interpolation of functions, numerical solution of nonlinear equations, and numerical solution of ordinary differential equations. Not open to students who have taken Computer Science 121. Prerequisite: Computer Science 8 or 53; Mathematics 31; 32; 104 or 111. One course. *Staff*

170. Methodologies in Artificial Intelligence. (QR) Theories of representation and search in artificial intelligence. Logic, semantic networks, production rules, frames, distributed models, and procedural representations; algorithmic and heuristic search. Not open to students who have taken Computer Science 115. One course. *Biermann or Loveland*

191, 192. Independent Study. Directed reading and research for qualified juniors. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

193, 194. Independent Study. Directed reading and research for qualified seniors. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

195. Computer Science Internship. Open to computer science majors engaged in industrial work experience only. A faculty member will supervise a program of study related to the work experience, including a substantive paper containing significant analysis and interpretation on a computer science-related topic. Consent of director of internship programs required. Prerequisites: Computer Science 104 and 108. One course. *Staff*

196. Topics in Computer Science. (QR) Topics from various areas of computer science, changing each year. Prerequisites: Computer Science 8 and 100 or equivalent. One course. *Staff*

198S. Seminar in Research Practice and Methodology. (QR) Methodologies in the formulation, analysis, and solution of ill-posed and ill-structured problems. General research techniques, mathematical modeling, search methodologies, experimental design, simulation, statistical analysis, report writing. Not open to students who have taken Computer Science 185S. Prerequisites: four courses in mathematics (MTH 31 or above), four courses in computer science (CPS 8 or 53 or above), and one course in statistics. One course. *Biermann and staff*

For Seniors and Graduates

206. Programming Languages. (QR) Information binding, data structures and storage, control structures, recursion, execution environments, input/output; syntax and semantics of languages; study of PL/1, Fortran, Algol, APL, LISP, SNOBOL, and SIMULA; exercises in programming. Not open to students who have taken Computer Science 201. Prerequisite: Computer Science 200 or 208. One course. *Wagner*

208. Programming Methodology. (QR) Practical and theoretical topics including structured programming, specification and documentation of programs, debugging and testing strategies, choice and effective use of programming languages and systems, psychology of computer programming, proof of correctness of programs, analysis of algorithms, and properties of program schemata. Not open to students who have taken Computer Science 200. Prerequisite: Computer Science 100 or 103. One course. *Staff*

210. Operating Systems. (QR) Fundamental principles of operating system design applied to state-of-the-art computing environments (multiprocessors and distributed systems) including process management (coscheduling and load balancing), shared memory management (data migration and consistency), and distributed file systems. Advanced topics include transaction-based operating systems, reliable communication protocols, concurrency control and recovery mechanisms, computer security, and performance analysis. Not open to students who have taken Computer Science 231. One course. *Chase or Ellis*

214. Computer Networks and Distributed Systems. (QR) Basic systems support for process-to-process communications across a computer network. The TCP/IP protocol suite and the Berkeley sockets application programs interface. Development of network application programs based on the client-server model. Remote procedure call and implementation of remote procedure call. Not open to students who have taken Computer Science 255. Prerequisite: knowledge of the C programming language. One course. *Staff*

216. Data Base Methodology. (QR) Basic concepts and principles. Relational, hierarchical, and network approaches to data organization; data entry and query language support for data base systems; theories of data organization; security and privacy issues. Not open to students who have taken Computer Science 241. Prerequisites: Computer Science 104 and either 109 or 155 or equivalent. One course. *Staff*

218. Compiler Construction. (QR) Models and techniques used in the design and implementation of assemblers, interpreters, and compilers. Lexical analysis, compilation of arithmetic expressions and simple statements, specifications of syntax, algorithms for syntactic analysis, code generation and optimization techniques. Not open to students who have taken Computer Science 232 before fall 1994. One course. *Wagner*

220. Computer Systems Organization. Hardware and software aspects. Processor, memory, device, and communication subsystems; case studies of hardware system organization, for example, parallel, associative, fault-tolerant; organization of software systems to exploit hardware systems organization; economic and reliability aspects of various hardware organizations. Not open to students who have taken Computer Science 252 before fall 1994. Prerequisites: Computer Science 104 and 120 or 157. One course. *Kedem, Lebeck, or Wagner*

222. Introduction to VLSI Systems. A first course in VLSI design with CMOS technologies. A study of devices, circuits, fabrication technology, logic design techniques, subsystem design and system architecture. Modeling of circuits and subsystems. Testing of gates, subsystems and chips, and design for testability. The fundamentals of full-custom design, and some semi-custom design. Not open to students who have taken Computer Science 210 before fall 1994. Prerequisite: Electrical Engineering 151 or equivalent; Electrical Engineering 161 or equivalent. One course. *Staff*

223. Application Specific VLSI Design. (QR) Introductory VLSI design course. Modern design methods and technology for implementing application specific integrated circuits (ASICs). Semicustom design methodology, semicustom VLSI technologies such as gate arrays, standard cells and FPGAs; the use of ASIC Computer Aided Design (CAD) tools. Mapping algorithms into high performance silicone implementation. Prerequisite: course in logic design. One course. *Kedem*

225. Fault-Tolerant and Testable Computer Systems. Not open to students who have taken Computer Science 207. Prerequisite: Electrical Engineering 151L or equivalent. See C-L: Electrical Engineering 254. One course. *Marinos*

226. Mathematical Methods for Systems Analysis I. (QR) Basic concepts and techniques used in the stochastic modeling of systems. Elements of probability, statistics, queuing theory, and simulation. Prerequisite: four semesters of college mathematics. C-L: Electrical Engineering 255. One course. *Trivedi*

230. Design and Analysis of Algorithms. (QR) Design and analysis of efficient algorithms. Algorithmic paradigms. Applications include sorting, searching, dynamic structures, graph algorithms, randomized algorithms. Computationally hard problems. NP completeness. Not open to students who have taken Computer Science 205. Prerequisite: Computer Science 100 or equivalent. One course. *Agarwal, Kao, or Reif*

232. Mathematical Analysis of Algorithms. (QR) Techniques for efficient implementation and precise analysis of computer algorithms. Combinatorial mathematics and elementary probability. Emphasis on obtaining exact closed-form expressions describing the worst-case or average-case time and space requirements for particular computer algorithms, whenever possible. Asymptotic methods of analysis for obtaining approximate expressions in situations where exact expressions are too difficult to obtain or to interpret. Not open to students who have taken Computer Science 202. Prerequisites: Mathematics 103 and 104 or equivalents. One course. *Vitter*

234. Computational Geometry. (QR) Models of computation and lower-bound techniques; storing and manipulating orthogonal objects; orthogonal and simplex range searching, convex hulls, planar point location, proximity problems, arrangements, parsing programming and parametric search technique, probabilistic and incremental algorithms. Not open to students who have taken Computer Science 240 before fall 1994. Prerequisite: Computer Science 205 or 230 or equivalent. One course. *Agarwal or Reif*

236. Parallel Algorithms. (QR) Models of parallel computation including parallel random access machines, circuits, and networks; NC algorithms and P-completeness; graph algorithms, sorting algorithms, network routing, tree contraction, string matching, parsing algorithms; randomization and derandomization techniques. Not open to students who have taken Computer Science 230 before fall 1994. Prerequisite: Computer Science 205 or 230 or equivalent. One course. *Kao or Reif*

240. Computational Complexity. (QR) Turing machines, undecidability, recursive function theory, complexity measures, reduction and completeness, NP, NP-Completeness, co-NP, beyond NP, relativized complexity, circuit complexity, alternation, polynomial time hierarchy, parallel and randomized computation, algebraic methods in complexity theory, communication complexity. Not open to students who have taken Computer Science 225 before fall 1994. Prerequisite: Computer Science 140 or equivalent. One course. *Agarwal*

250. Numerical Analysis. (QR) Error analysis, interpolation and spline approximation, numerical differentiation and integration, solutions of linear systems, nonlinear equations, and ordinary differential equations. Not open to students who have taken Computer Science 221. Prerequisites: knowledge of an algorithmic programming language, intermediate calculus including some differential equations, and Mathematics 104. C-L: Mathematics 221 and Statistics 273. One course. *Rose or Sun*

252. Numerical Methods for Partial Differential Equations. (QR) Survey of theory, algorithms, and codes for the numerical solution of nonlinear partial differential equations of initial value and boundary value type. Topics include finite-difference, spectral, and finite-element representations; stability of time-discretization techniques; adaptive spatial meshes; multigrid and preconditioned conjugate gradient techniques; solution on parallel

computers. Not open to students who have taken Computer Science 222 before fall 1994. Prerequisite: Computer Science 221 or 250. C-L: Mathematics 222. One course. *Rose or Sun*

254. Numerical Linear Algebra. (QR) Solution of large, sparse linear systems of equations. Storage schemes, graph theory for sparse matrices, different orderings to minimize fill, block factorizations, iterative methods, analysis of different splittings, conjugate gradient methods. Eigenvalue problems, QR factorization, Lanczos method, power method and inverse iteration, Rayleigh quotient. Not open to students who have taken Computer Science 223 before fall 1994. Prerequisite: Computer Science 221 or 250 or equivalent. C-L: Mathematics 223. One course. *Rose or Sun*

260. Introduction to Computational Science. (QR) Introduction for students and faculty to computing resources that facilitate research involving scientific computing: contemporary computers, programming languages, numerical software packages, visualization tools, and some basic issues and methods for high performance algorithm design. Prerequisite: programming experience in Fortran or C, calculus, numerical linear algebra or equivalent. One course. *Greenside, Rose, or Sun*

264. Nonlinear Dynamics. (QR) Introduction to the mathematical theory of nonlinear dynamics, and how this theory compares with physical experiments, with applications to biology (Turing states and morphogenesis), computer science (randomness and computability), mathematics (chaos and strange attractors), and physics (pattern formation and transition to turbulence). Not open to students who have taken Computer Science 213. Prerequisites: Computer Science 8 or 53, Mathematics 111, and Physics 51L, 52L. C-L: Physics 213. One course. *Behringer or Greenside*

266. Communication, Computation, and Memory in Biological Systems. (QR) Communication and memory in biological systems: voltage sensitive ion channels, hormone-receptor interactions, and initiation and control of RNA/DNA synthesis. Models of signaling and memory are developed and related to electronic signaling schemes. Not open to students who have taken the former Computer Science 228. Prerequisites: Computer Science 100 or 103, two semesters of college chemistry, and four semesters of college mathematics. One course. *Starmer*

270. Artificial Intelligence. (QR) Heuristic versus algorithmic methods; programming of games such as chess; theorem proving and its relation to correctness of programs; readings in simulation of cognitive processes, problem solving, semantic memory, analogy, adaptive learning. Not open to students who have taken Computer Science 215. Prerequisite: Computer Science 100 or 103 or consent of instructor. One course. *Biermann or Loveland*

274S. Computational Linguistics Seminar. (QR) Readings and research seminar on topics related to the processing of English or other natural languages: syntax, semantics, pragmatics, discourse, and others. Not open to students who have taken Computer Science 216S. Prerequisite: Computer Science 215 or 270 or consent of instructor. One course. *Biermann*

291. Reading and Research in Systems. (QR) One course. *Staff*

292. Reading and Research in Algorithms and Complexity. (QR) One course. *Staff*

293. Reading and Research in Scientific Computing. (QR) One course. *Staff*

294. Reading and Research in Artificial Intelligence. (QR) One course. *Staff*

296. Advanced Topics in Computer Science. Not open to students who have taken Computer Science 265. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

242. Logic for Computer Science. (QR)

256. Functional Analysis for Scientific Computing. (QR)

THE MAJOR

For the A.B. Degree

Prerequisites. Mathematics 31, 32.

Major Requirements. Computer Science 6 or 8, 100, 104, 108, 110, and 130; two electives at the 100 level or above: one in mathematics, and one in computer science or electrical engineering; and Mathematics 135 or Statistics 112. Suggested sequences to fill these elective slots would be a scientific computing sequence: Mathematics 104 and Computer Science 150, or the general symbolic computation sequence: Mathematics 187 and Computer Science 170 or 198. If Mathematics 135 is elected, it is recommended that it be followed by Mathematics 136. Students must complete at least five additional courses at the 100 level or above (excluding the above listed requirements). The five courses may be a mixture of courses in Computer Science and/or one other department, or with the approval of the director of undergraduate studies, may consist of a coherent plan of courses drawn from multiple departments.

For the B.S. Degree

Prerequisites. Mathematics 31, 32, 103, 104; one of the following pairs of courses: Chemistry 11L, 12L or Physics 51L, 52L or Physics 53L, 54L or Physics 41L, 42L.

Major Requirements. Computer Science 6 or 8, 100, 104, 108, 110, 130, 140, and 150; two elective courses at the 100 level or above in computer science, electrical engineering, or mathematics; Electrical Engineering 151; Mathematics 135 or Statistics 112; and Mathematics 124 or 187. If Mathematics 135 is selected, it is recommended that Mathematics 136 be taken also.

Honors/Distinction

Students who are qualified (see the section on honors in this bulletin) may undertake work leading to a B.A. or B.S. degree with distinction in computer science by applying to the director of undergraduate studies. Normally, candidates must have grades of A in computer science courses. They must complete a substantial project, suitably documented, or a distinguished paper on which they will be examined orally by a committee of three faculty members.

THE MINOR

Five courses in Computer Science (including the prerequisite), at least four of which must be at the 100 level or above.

Prerequisites. Computer Science 100E, or both Computer Science 6 and Computer Science 100.

Requirements. Computer Science 104; additional courses from the following: Computer Science 108, 110, 130, 150, 170, or any 200-level course.

INTERNSHIP PROGRAM

The Computer Science Internship Program (CSIP) provides undergraduate computer science majors the opportunity to apply knowledge gained in the classroom to a job, and to build on this knowledge upon their return. The internship period is a two-semester leave consisting of one summer plus the spring semester before or the fall semester following. This period can be extended by one additional semester. One credit can be earned in the

semester following the internship period through the independent study course Computer Science 195.

To participate in the CSIP program, students must take Computer Science 104 and 108, and declare computer science as their first major. An application for the CSIP program should be completed at the beginning of the semester prior to the internship period to allow time for interviewing with companies. Approval for Computer Science 195 must be obtained before the internship begins, and a faculty mentor associated with this course must be designated at this time. For further information, contact the Director of the Internship Program, Department of Computer Science.

Cultural Anthropology (CA)

Professor O'Barr, *Chair*; Associate Professor Allison, *Director of Undergraduate Studies*; Professors Apte, Mignolo (romance studies), and Reddy (history); Associate Professors Andrews (Slavic languages), Quinn, Silverblatt, and Tetel (English); Assistant Professors Baker, Ewing, Litzinger, Starn, and Strauss; Professor Emeritus Friedl; Assistant Research Professor Chandler (English); Assistant Professors of the Practice Luttrell and Piot; Adjunct Professors Conley and Peacock; Lecturer Daniels

A major or minor is available in this department.

Cultural anthropology is a comparative discipline that studies the world's peoples and cultures. It extends perspectives developed from anthropology's initial encounter with the "primitive" world to studies of complex societies including rural and urban segments of the Third World and contemporary industrial countries.

Cultural anthropologists at Duke concentrate on political economy, culture, ideology, history, and discourse, and the relations among them. These concerns lead them to such specific research and teaching interests as: colonialism and state formation; the role of culture in cognition; the politics of representation and interpretation; the bases of ideological persuasion and resistance; gender ideology; language use in institutional contexts; class formation and political consciousness; the creation and use of ethnic and national identities. The department also offers courses that introduce the various traditional subfields of cultural anthropology, and other, integrative courses on world areas. Students without prerequisites for a course may ask the instructor for admission.

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

60S. Culture and the Brain. (SS) The interaction of culture and the human brain, focusing on how human brains are shaped by culture, the nature of meaning, connectionist models of cognition, different ways of knowing, and collective thought. Open only to students in the FOCUS Program, Exploring the Mind. One course. *Strauss*

62S. Culture and Politics in Contemporary Chinese Cinema. (CZ, SS) An introduction to Chinese film, paying particular attention to its global reception in recent years. How film represents national, ethnic, and regional identities, as well as questions of sexuality and gender relations. Open only to students in the FOCUS Program. One course. *Litzinger*

64S. Mass Culture in Latin America. (SS) Cultural and political questions at stake in the spread of mass media and entertainment to Latin America. The way the news media, television dramas, and Hollywood movies depict the peoples of Latin America; the emergence of new regional traditions of news coverage, film, and popular entertainment. Open to students in the FOCUS Program. One course. *Starn*

94. Introduction to Cultural Anthropology. (SS) Theoretical approaches to analyzing cultural beliefs and practices cross-culturally; application of specific approaches to case material from present and/or past cultures. C-L: Comparative Area Studies. One course. *Staff*

101, 102. Introduction to the Civilizations of Southern Asia. (CZ) Not open to students who have taken Religion 160, 161. See C-L: Asian and African Languages and Literature 160, 161; also C-L: Comparative Area Studies; History 193, 194; and Religion 144, 145. One course each. *Khanna or staff*

103. Sexuality and Culture in America. (SS) The different cultural contexts that give meaning to and regulate sexuality in America. Topics include the rise of youth culture and its impact on sexual expression; the effects of popular culture and media on sexual beliefs and practices; how different campus cultures shape sexual behaviors and attitudes; and the rise of gay and lesbian culture and politics. C-L: Study of Sexualities, Sociology 103, and Women's Studies. One course. *Luttrell*

104. Anthropology and Film. (SS) The study of feature films and documentaries on issues of colonialism, imperialism, war and peace, and cultural interaction. An introduction to critical film theory and film production in non-Western countries. C-L: Film and Video. One course. *Litzinger*

105S. Theme Seminar. Topics vary. One course. *Staff*

106. The Anthropology of Everyday Life in America. (SS) Various popular cultural forms—the game of baseball, the cowboy and the western, the ritual cycle (from Halloween through Easter), the new children's video games (Nintendo, Sega Genesis)—are explored for the way in which they at once reproduce and subvert American ideology. One course. *Piot*

107. Introduction to Linguistics. (SS) See C-L: Linguistics 101; also C-L: Comparative Area Studies and English 111. One course. *Butters or Tetel*

108. Fantasy, Mass Media, and Popular Culture. (SS) A cross-cultural study of how images and stories that are mass produced affect the world view, identities, and desires of their consumers. C-L: Comparative Area Studies. One course. *Allison*

109. Contemporary Global Issues. (SS) See C-L: Comparative Area Studies 109; also C-L: History 109, Political Science 160, and Sociology 175. One course. *Staff*

110. Advertising and Society: Global Perspective. (SS) History and development of commercial advertising; advertising as a reflector and/or creator of social and cultural values; advertisements as cultural myths; effects on children, women, and ethnic minorities; advertising and language; relation to political and economic structure; and advertising and world culture. Emphasis on American society complemented by case studies of advertising in Canada, Japan, Mexico, Russia, Western Europe, and selected other countries. C-L: Comparative Area Studies, English 120, Film and Video, Sociology 160, and Women's Studies. One course. *Luttrell, O'Barr, J. Smith, or Wilson*

111. Anthropology of Law. (SS) Comparative approach to jurisprudence and legal practice, dispute resolution, law-making institutions and processes, and the relation of law to politics, culture, and values. One course. *Conley or O'Barr*

112. Current Topics in Linguistics. (SS) Advanced study of an area of linguistics or grammar. C-L: English 119 and Linguistics. One course. *Staff*

113. Gender and Culture. (SS) Explanation of differing beliefs about gender cross-culturally, by comparison with dominant themes about gender in our own cultural history and contemporary ideological struggles. C-L: Study of Sexualities and Women's Studies. One course. *Allison, Luttrell, Quinn, or Silverblatt*

114. Languages of the World. (SS) See C-L: Linguistics 102; also C-L: Comparative Area Studies and English 114. One course. *Andrews or Tetel*

115S. The Anthropology of Gender: Special Topics. (SS) Topics to be selected each semester from: gender myths; gender in mass media; science, gender, and culture; gender, work, and family; gender and the state; and others. C-L: Women's Studies. One course. *Allison, Luttrell, Quinn, Silverblatt, or Starn*

117. Global Culture. (SS) Globalization examined through some of its dominant cultural forms—the marketing of pop music, the dissemination to TV culture, the spread of markets and commodities, the export of political ideologies. Special attention given to the implication of globalization for individual and group identity. C-L: Comparative Area Studies. One course. *Piot*

119. Language, Culture, and Society. (SS) Analysis of language behavior within and across societies. Topics include the relation of language structures to cultural values, the role of speech in expressing and creating relations of power and intimacy, and the way social ideologies shape different kinds of discourse. C-L: Comparative Area Studies and Linguistics. One course. *Apte, O'Barr, or Strauss*

120. South Asia: Institutions and Change. (CZ) Cultures and societies of India, Pakistan, Sri Lanka, Bangladesh, Nepal, and Bhutan with emphasis on social institutions, behavioral patterns, value systems, and sociocultural change. C-L: Comparative Area Studies. One course. *Apte or Ewing*

122. Culture and Politics in Africa. (CZ) Cultures and societies of Africa through the study of kinship, politics, economics, ecology, religion, and aesthetics in the context of colonialism and postcolonialism. C-L: African and African-American Studies 122 and Comparative Area Studies. One course. *Piot*

124. American Indian Peoples. (CZ) Past and contemporary conditions of American Indian life, with an emphasis on North America. Social and political organization, gender relations, changing economic patterns, cultural themes and variations, spirituality, the effects of anti-Indian wars, policies, and prejudice, and the emergence of movements for self-determination. C-L: Comparative Area Studies. One course. *Staff*

125. Comparative Approaches to Global Issues. (SS) Not open to students who have taken Religion 121. See C-L: Comparative Area Studies 125; also C-L: History 137, Political Science 125, Religion 183, and Sociology 125. One course. *Staff*

126. Muslim World: Transformations and Continuities. (SS) The diversity of social practices within the community of Islam. Particular emphasis on gender relations, religious movements, and social change. C-L: Comparative Area Studies and Women's Studies. One course. *Ewing*

127. Culture and Politics in Japan. (CZ) The intersection between Japanese economic and political institutions and the cultural conventions that establish and challenge Japanese identity in the 1990s. C-L: Comparative Area Studies. One course. *Allison*

128. Culture and Politics in Latin America. (CZ) Key themes in Latin American societies, including art, literature, history, violence and human rights, economic development, and rebellion and revolution. C-L: Comparative Area Studies. One course. *Starn*

129. Introduction to North America. (CZ, SS) See C-L: North American Studies 110; also C-L: Economics 115, History 108F, Political Science 119, Public Policy Studies 115, Romance Studies 125, and Sociology 109. One course. *Shanahan*

130. Modernity, Ethnicity, and Colonization. (AL, CZ) See C-L: Romance Studies 124; also C-L: African and African-American Studies 123, Canadian Studies, and Comparative Area Studies. One course. *Mignolo or staff*

131S. Documentary Film/Video Theory and Practice. (AL) Prerequisite: Drama 173, English 101A, Literature 110, or Literature 111S. See C-L: Film and Video 104S; also C-L: English 101C. One course. *Staff*

133S. Critical Perspectives on Ethnography. (SS) Overview and evaluation of the conceptual, theoretical, and methodological aspects underlying ethnographic fieldwork, and the writing and reading of ethnographies. One course. *Apte*

134S. American Communities: A Documentary Video Approach. (AL, SS) Prerequisites: English 101A and any one of the following: Film and Video 100S, 101S, or 104S. See C-L: Film and Video 105S; also C-L: History 150B, Political Science 156S, and Public Policy Studies 105S. One course. *Staff*

135. U.S. Cultures in Cross-Cultural Perspective. (SS) An examination of the major values said to characterize Americans—the values of self-reliance, equality, success, self-realization, and love among others—tracing their persistence and change over time, investigating compatibilities and conflicts among them, and comparing the American case with other strategically selected cases in order to illuminate the American pattern. One course. *Quinn or Strauss*

138. Religious Movements. (CZ, SS) Religious responses to modernity and colonialism. Religion and social change in complex societies. The psychology and politics of conversion. C-L: Religion 173. One course. *Ewing*

139. Marxism and Society. (SS) A critical appraisal of Marxism as a scholarly methodology for understanding human societies. The basic concepts of historical materialism, as they have evolved and developed in historical contexts. Topics include sexual and social inequality, alienation, class formation, imperialism, and revolution. Core course for the program in Perspectives on Marxism and Society. C-L: Comparative Area Studies, Education 139, History 186, Literature 181, and Sociology 139. One course. *Staff*

140S. Cultural Diversity in the Andes. (CZ, FL) (Taught in Bolivia in the Duke in the Andes Program.) See C-L: Spanish 140E; also C-L: Comparative Area Studies. One course. *Staff*

141. Self and Society. (SS) The nature of human social identities, the contexts in which they are shaped, and the processes by which they change. C-L: Psychology 113A. One course. *Apte, Ewing, or Luttrell*

142. Sexuality in Global Perspective. (SS) Cross-cultural perspectives on the meaning, regulation, and politics of sexuality. Course materials drawn from historical-comparative and ethnographic sources with emphasis on variations in how masculinity and femininity are represented; what is considered erotic; how heterosexuality and homosexuality are defined; impact of Western notions about sexuality on the lives of people in Third World countries. C-L: Comparative Area Studies, Study of Sexualities, and Women's Studies. One course. *Luttrell*

143. Education, Culture, and Society. (SS) How social divisions and inequalities are created and challenged through the schooling process. Primary emphasis on American education. C-L: Education 143. One course. *Luttrell*

147, 148. Introduction to Islamic Civilization. (CZ) Not open to students who have taken Religion 162, 163. See C-L: Religion 146, 147; also C-L: Comparative Area Studies; History 101G, 102G; and Medieval and Renaissance Studies. One course each. *Cornell, Lawrence, and staff*

151. Culture and Thought. (SS) The cultural basis of understanding, including feeling, motivation, and cognitive tasks such as reasoning and categorizing. Reconstruction of

cultural assumptions from discourse. Evidence for cross-cultural variation and cultural universals in human thought. Not open to students who have taken Cultural Anthropology 251 (Cognitive Anthropology). One course. *Quinn or Strauss*

163. Foundations of Chinese Civilization. (CZ) The contemporary experience in China and its relation to ethnic, spiritual, social, aesthetic, moral, political, and economic themes in China's past. (Taught in China.) Not open to students who have taken History 163. C-L: Comparative Area Studies and History 100J. One course. *Staff*

165. Psychological Anthropology. (SS) The influence of society on human personality and cognition. Theoretical and ethnographic studies used to explore topics that may include gender, sexuality, emotions, parent-child interaction, the effect of language on thought, and the universality of the "self." C-L: Psychology 113B. One course. *Ewing or Strauss*

166. Cross-Cultural Perspectives on Development: A View from Japan. (SS) See C-L: Psychology 132B. One course. *Mazuka*

174. Gender and Language. (SS) See C-L: Russian 174; also C-L: English 115. One course. *Andrews*

180. Current Issues in Anthropology. (SS) Selected topics in methodology, theory, or area. One course. *Staff*

180S. Current Issues in Anthropology. (SS) Same as Cultural Anthropology 180 except instruction is provided in seminar format. One course. *Staff*

182S. Contemporary European Issues. (CZ) (Taught in Madrid.) Consent of instructor required. See C-L: Spanish 120S. One course. *Staff*

184S. Canadian Issues. (SS) Prerequisite: Canadian Studies 98 or consent of instructor. See C-L: Canadian Studies 184S; also C-L: Comparative Area Studies, Economics 184S, History 184S, Political Science 184S, and Sociology 184S. One course. *Staff*

185S. The Canadian Health Care System. (SS) See C-L: Canadian Studies 185S; also C-L: Comparative Area Studies, Economics 185S, History 108E, Political Science 185S, Public Policy Studies 187S, and Sociology 185S. One course. *Warren or staff*

190. Theoretical Foundations of Cultural Anthropology. (SS) Major schools and theories of cultural anthropology. Normally taken in sophomore or junior years. C-L: Comparative Area Studies. One course. *Staff*

193. Independent Study. Directed reading and research. Open only to qualified seniors, with consent of director of undergraduate studies. One course. *Staff*

195S, 196S. Senior Seminar. Consent of director of undergraduate studies required. One course each. *Staff*

199A, S. The Articulation of Culture in the Bolivian Andes. (FL, SS) (Taught in Bolivia.) See C-L: Spanish 140A. One course. *Staff*

199B. Bolivian Cultural Anthropology. (FL, SS) The diverse indigenous cultures of Bolivia, the organization of ethnic groups and indigenous communities, with emphasis on the Andean "ayllu." Focus on markets, rallies, community groups, states, and armies. The relationship between culture and power. (Taught in Bolivia.) One course. *Staff*

199C. Bolivian Culture. (CZ, FL) History of the peoples of Bolivia, the most Indian of the Latin American republics. Special emphasis on the multiethnic and largely rural society. The Spanish colonial past and the predominance of Amerindian languages such as Quéchuá and Aymara and the occurrence of some pre-Incan languages. The complex amalgam of Western and non-Western cultures. (Taught in Bolivia.) C-L: History 100U. One course. *Staff*

199E. S. Colonialism, Ethnicity, and Gender in Postrevolutionary Bolivia. (CZ, FL) (Taught in Bolivia.) See C-L: Sociology 188B; also C-L: Spanish 140B and Women's Studies. One course. *Staff*

For Seniors and Graduates

201S. Marxism and Anthropology. (SS) The interaction of Marxist and anthropological theory over the last half century; particular attention to evolution, historical transformation, mode of production, labor processes, culture, ideology, and consciousness. One course. *Staff*

202. Semiotics of Culture. (AL, CZ) See C-L: Russian 202; also C-L: English 206. One course. *Andrews*

207S. Anthropology and History. (SS) Recent scholarship that combines anthropology and history, including culture history, ethnohistory, the study of mentalité, structural history, and cultural biography. The value of the concept of culture to history and the concepts of duration and event for anthropology. Prerequisite: major in history, one of the social sciences, or comparative area studies; or graduate standing. C-L: History 210S. One course. *Reddy*

208S. Postcolonial Anthropology. (SS) Interdisciplinary approach to the review and critique of postcolonial ethnography and historiography. How postcolonial scholarship questions historical modes of cultural ordering and representation and envisions new modes of reading and writing in relation to global structures of domination. One course. *Ewing, Litzinger, Silverblatt, or Starn*

210S. Ideology and the Image in Ethnographic Film. (SS) Overview of the history of ethnographic film. Emphasis placed on knowledge of the film canon, recent innovations in ethnographic documentation, and critical skills for understanding the political and epistemological quandaries of representation. Topics such as narrativity, authorship, spectatorship, and psychoanalytic and feminist film criticism explored in relation to ethnographic film theory and practice. C-L: Film and Video. One course. *Litzinger*

215S. The Anthropology of Gender: Theoretical Issues. (SS) Topics to be selected each semester from: feminist theory and anthropology; Marxism and feminism; gender, ideology, and culture; gender and colonialism; gender and the third world; and others. C-L: Women's Studies. One course. *Allison, Luttrell, Quinn, Silverblatt, or Starn*

216S. Gender, Race, and Class. (SS) Gender, race, and class as theoretical constructs and lived experiences. Analytical frameworks include social history, discourse analysis, critical theory, cultural studies, and feminist theories. Consent of instructor required. C-L: Study of Sexualities. One course. *Luttrell*

220S. Theoretical Bases of Social Interpretation. (SS) See C-L: History 290S. One course. *Reddy*

232S. Historical and Anthropological Approaches to Emotion. (CZ) See C-L: History 232A. One course. *Reddy*

234S. Political Economy of Development: Theories of Change in the Third World. (SS) See C-L: Political Science 234S; also C-L: Comparative Area Studies, History 234S, and Sociology 234S. One course. *Staff*

250S. Culture and Discourse. (SS) Theoretical approach to culture and methods for the investigation of culture through analysis of discourse, especially interview texts. Application of this approach and these methods to the study of a domain of American culture. C-L: Linguistics. One course. *Apte, Ewing, O'Barr, Quinn, or Strauss*

251. Cognitive Anthropology. (SS) A cognitively-based theory of culture, its history, justification, substantiation through discourse analysis, application to everyday under-

standing, feeling and motivation, and implications for the acquisition of culture, cross-cultural variation, and cultural universals in human thought. Not open to students who have taken Cultural Anthropology 151. One course. *Quinn or Strauss*

253S. Person-Centered Interviewing. (SS) Strategies for effective interviewing, including how to establish rapport, ask productive questions, recognize nonverbal communications, and interpret data using various theoretical models. Students are required to conduct several interviews during the semester. Consent of instructor required. One course. *Ewing*

255. Anthropology as Public Discourse. (SS) The historic role of science in general and anthropology in particular in shaping U.S. public discourse on culture, immigration, race, and ethnicity. Anthropological texts within their historical and political contexts; how policy experts, pundits, legislators, and others appropriate anthropological ideas for specific agendas. C-L: African and African-American Studies 255. One course. *Baker or Strauss*

258S. Theories of Symbolism. (SS) Influential interpretations of symbols, what they do, and how they do it. The relationship of language to symbolism and symbolism to power. Prerequisites: junior/senior status and at least two courses in cultural anthropology, or graduate standing. One course. *Ewing*

262S. Anthropology and Folklore. (SS) Origins, conceptualizations and theoretical orientations, methodology, and subject matter of the discipline of folklore and exploration of its similarities with and differences from sociocultural anthropology. One course. *Apte*

263. The Bestseller: Cultural Populism in the 1990s' China. (AL) See C-L: Asian and African Languages and Literature 259; also C-L: Literature 279. One course. *Wang*

265S. Anthropological Approaches to Life History. (SS) Form and function of life history and its linkages to sociocultural systems; methodology for collecting life history in ethnographic fieldwork; textual, social-structural, and interpretive analyses of life history. One course. *Apte*

270S. Non-Western Indigenous Anthropology. (SS) An examination of the development of indigenous anthropology in non-Western societies with a focus on the theoretical, methodological, and ideological orientations of its practitioners in the context of nationalism, neo-colonialism, and globalization. One course. *Apte*

279S. Race, Racism, and Democracy. (SS) The paradox of racial inequality in societies that articulate principles of equality, democratic freedom, and justice for all. C-L: African and African-American Studies 279S. One course. *Baker*

280S, 281S. Seminar in Selected Topics. Special topics in methodology, theory, or area. Consent of instructor required. One course each. *Staff*

282S. Canada. (SS) See C-L: Canadian Studies 282S; also C-L: Comparative Area Studies, Economics 282S, History 282S, Political Science 282S, and Sociology 282S. One course. *Thompson or staff*

283S. Seminar in North American Studies. (CZ) See C-L: North American Studies 283S; also C-L: History 283S, Political Science 285S, Public Policy Studies 282S, Romance Studies 283S, and Sociology 283S. One course. *Staff*

288S. Seminar in Asian and African Cultural Studies. (CZ) See C-L: Asian and African Languages and Literature 200S; also C-L: African and African-American Studies 200S and Literature 200S. One course. *Ching*

290. Research Methods in Japanese. (SS) Consent of instructor required. See C-L: Japanese 291; also C-L: History 292, Political Science 291, and Sociology 291. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

- 94S. Introduction to Cultural Anthropology. (SS)
- 116. Language, Ethnicity, and New Nations. (SS)
- 118S. The Language of Advertising. (SS)
- 121. Culture and Politics in China. (CZ, SS)
- 123. Societies of Mediterranean Europe. (CZ)
- 132. Anthropology of Peace and War. (SS)
- 136S. American Marriage. (SS)
- 144. The Anthropology of Race. (SS)
- 145. Medical Anthropology. (SS)
- 161. Anthropological Approaches to Religion. (SS)
- 164. Peasantry and Peasant Movements. (SS)
- 173. Revolutions in Latin America. (CZ)
- 206S. Anthropological Controversies. (SS)
- 211S. Ethnography of Communication. (SS)
- 214. Postmodernism and the Problem of Representation. (SS)
- 219. Language and Social Theory. (SS)
- 239. Culture and Ideology. (SS)
- 261. Religion: Tradition and Cultural Innovation. (SS)
- 272S. Marxism and Feminism. (SS)

THE MAJOR

Major Requirements. A total of ten courses distributed in the following manner:

Cultural Anthropology 94 and 190; four courses at the 100 level and above, taught by faculty with an appointment in the Cultural Anthropology Department; two courses at the 200 level and above, at least one taught by faculty with an appointment in the Cultural Anthropology Department; two courses in cultural anthropology. One of these courses must be at the 100 level and above; both may be courses cross-listed from another department.

Suggested Work in Related Disciplines. Related courses in other departments are strongly advised. Each student's advisor will recommend a program of related work to complement the student's concentration and interests in cultural anthropology.

Honors/Distinction

The department offers an intensive and personalized graduation with distinction program to qualified seniors, who research and write a senior honors thesis on a topic of their own choice in close collaboration with members of the cultural anthropology faculty. Admission to the program requires a 3.0 grade point average overall and a 3.3 grade point average in the major, both of which must be maintained to graduation for the student to be eligible for distinction. Qualified juniors will be notified each year by the director of undergraduate studies about their eligibility. To pursue honors, students must then enroll in the senior seminar, Cultural Anthropology 195S and Cultural Anthropology 196S, in the fall and spring of their senior year, where they will learn about research methods and prepare a thesis. Credit for Cultural Anthropology 195S and Cultural Anthropology 196S is given for a passing grade whether or not the student is awarded distinction. The thesis can be based on original fieldwork on a topic of the student's choice, archival or library research, or some combination of various anthropological methods. Previous topics have ranged from studies of the influence of feminism in cultural anthropology to causes of revolution in Latin America and patterns of socialization of Mormon youth in Utah. The student also forms a supervisory committee for the thesis during the fall of the senior year. It should consist of three faculty members who offer the student advice and support in preparing the thesis. At least two of the members must be faculty from the cultural anthropology department. Due in April of the senior year, the thesis must be judged of at least B+ quality by the supervisory

committee to receive distinction. In addition, the student must pass an oral examination on the thesis, which is given on its completion by the supervisory committee. Students who fulfill the above requirements graduate with distinction in cultural anthropology. A typical sequence would be:

- select a research topic;
- take the senior seminar in fall and spring;
- form a supervisory committee;
- complete the research and writing by April and submit the final draft to the supervisory committee;
- schedule the oral defense for some time in early or mid-April;
- defend the thesis in an oral examination given by the supervisory committee.

THE MINOR

Requirements. A total of five courses distributed in the following manner: Cultural Anthropology 94; three courses at the 100-level and above taught by faculty with an appointment in the Cultural Anthropology Department; and one additional course at any level taught by faculty with an appointment in the department (this may include courses taken in the FOCUS program).

Dance (DAN)

Associate Professor of the Practice Dickinson, *Director of the Program*; Associate Professor of the Practice Dorrance, *Director of Undergraduate Studies*; Professor of the Practice Taliaferro; Associate Professor of the Practice Sommer; Assistant Professor of the Practice Childs; Instructors Davis and Vinesett

A certificate, but not a major, is available in this program.

The Dance Program offers its students the opportunity to study modern dance, ballet, dance history, choreography, repertory, and non-Western dance forms in an environment that challenges the student's intellectual, expressive, and physical capabilities. A balanced integration between the creative/performance and the historical/theoretical aspects of dance is emphasized. Academic courses in dance provide a historical and theoretical foundation for the student's creative work. In turn, the student's participation in dance creation and performance, and the development of technical skill, deepen the student's scholarly appreciation of the medium. With this approach the aim of the program is to develop students who are sensitive physical communicators of the visual art of dance and who are articulate spokespeople for the art form.

Courses in technique and performance (partial credit courses) and theory courses (whole course credit) are offered. Dance theory courses fulfill seminar and the arts and literature area of knowledge requirements. Courses in technique and performance may be repeated for credit. A maximum total of four course credits (made up of partial credit courses) in technique and performance courses may count toward the thirty-four courses required for graduation.

The certificate, representing an area of concentration supplementing but not replacing a major, is available to all students in the program who meet the following requirements. To earn the certificate in dance, students take six course credits: one year (equivalent of one course credit) of Dance 81 (Repertory), and five full-credit courses including 101 (Introduction to Dance); either 129S (Dance as a Western Theater Art before 1900) or 131S (Modern Dance: History and Theory I) or 133 (History of African American Dance); 135S (Dance Composition); and two additional courses in dance at the 100 level or above. The student is expected to attain and/or maintain the high intermediate level of either modern dance or ballet technique.

Students are urged to enroll in at least one summer session with the American Dance Festival. If appropriate to the student's specific course of study, one course credit earned at the American Dance Festival may be counted toward the certificate requirements.

Through the Duke in New York Arts Program, a student has the opportunity in the fall semester of the junior or senior year to pursue the study of dance in New York City. Appropriate courses taken at New York University may fulfill certificate requirements.

Courses in Technique and Performance

60. Beginning Modern Dance I. A movement course exploring modern dance through technique, improvisation, and composition. No previous dance experience necessary. Half course. *Staff*

61. Beginning Modern Dance II. Prerequisite: Dance 60 or equivalent. Half course. *Staff*

62. Intermediate Modern Dance I. Increased complexity of movement sequences and greater emphasis on clarity of expression and quality of performance. Prerequisite: Dance 61 or equivalent. Half course. *Staff*

63. Intermediate Modern Dance II. Continuation of Dance 62. Prerequisite: Dance 62 or equivalent. Half course. *Staff*

64. Advanced Modern Dance. Prerequisite: Dance 63 or equivalent. Half course. *Staff*

67. Intermediate Tap Dance Technique. Prerequisite: minimum one year of study in tap dance. Half course. *Staff*

68. Ballet Fundamentals. Fundamentals of classical ballet technique concentrating on correct placement and body alignment within the ballet vocabulary. No previous dance experience necessary. Half course. *Staff*

69. Elementary Jazz Dance. No previous dance experience required. Half course. *Childs*

70. Elementary/Intermediate Ballet. Barre work concentrating on body alignment and correct placement within the ballet vocabulary followed by center adagio and allegro sequences. Prerequisite: Dance 68 or equivalent. Half course. *Dorrance*

71. Intermediate/Advanced Ballet. Greater complexity of barre and center sequences with increased emphasis on correctness of style and quality of performance. Prerequisite: Dance 70 or equivalent. Half course. *Dorrance*

72. Intermediate Jazz Dance. Prerequisite: Dance 69 or equivalent. Half course. *Childs*

73. Advanced Ballet. Progression of Dance 71 with increased emphasis on line, style, and performance-level quality and technique. Diverse batterie, pirouettes, and tours included in allegro combinations. Prerequisite: Dance 71 or equivalent. Half course. *Dorrance*

76. Flamenco. Introductory course presenting one of the three basic genres of Spanish dance: flamenco. Style, posture, techniques, and footwork; some historical background of the genre. Half course. *Staff*

78. African Dance Technique I. Introduction to West African dance styles. Half course. *Davis or Vinesett*

79. African Dance Technique II. Greater complexity of movement sequences, rhythm, gesture, and technique with a focus on clarity of expression and quality of performance. Prerequisite: Dance 78 or consent of instructor. Half course. *Vinesett*

80. Individual Dance Program: Special Topics. Half course. *Staff*

81. Repertory. The study of choreography and performance through participation in the mounting of a dance work from inception through rehearsal to performance. Consent of instructor required. Variable credit. *Staff*

Theory Courses

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

75. Theater Production and Management. (AL) Not open to students who have taken Drama 71 or 186. See C-L: Drama 93. One course. *Catotti*

101. Introduction to Dance. (AL) The many facets of dance, specifically dance as a theatre art. Topics include movement analysis, anthropology of dance, modern dance and ballet traditions, choreographic process, critics and dance criticism, training and life of a dancer, and dance and the other arts. The course format includes lecture, discussion, video analysis, and movement sessions. One course. *Dickinson or Sommer*

129S. A History of Ballet before 1900. (AL) A history of European ballet from the time of the Renaissance dancing master through ballet d'action, the Romantic Ballet, and Petipa and classical ballet in Russia. One course. *Dickinson*

131S. Modern Dance: History and Theory I. (AL) Modern dance, through the philosophy and work of its major artists considered in relation to the other arts and the sociopolitical climate of the period 1890 to 1950. One course. *Staff*

132S. Modern Dance: History and Theory II. (AL) See 131S, but from 1950 to the present. One course. *Staff*

133. History of African-American Social Dance Forms of the Twentieth Century. (AL) The evolution of African-American dance styles from the late 1890s to the 1990s in such dances as the Cakewalk, Charleston, Lindy Hop/Jitterbug through Bebop, Rock'n'Roll, Breaking, Popping, and current Freestyle forms. The influence of these popular forms on stage dance from ballet to jazz, and on movement styles of the younger generation throughout the world. C-L: African and African-American Studies 133. One course. *Sommer*

135S. Dance Composition. (AL) The basic elements of movement (time, space, weight, flow) and their choreographic applications explored through structured improvisation, short movement studies, viewing of videotaped dances, and selected readings. Experimentation with devices for movement manipulation and choreographic forms through longer movement studies. Prerequisite: a beginning level dance technique course (modern, ballet, jazz, or African) or consent of instructor. One course. *Childs or Dickinson*

136S. Advanced Dance Composition. (AL) Continuation of the basic elements of movement, choreographic devices and forms explored in 135S. The use of props, sets, lighting and costuming; the relationship of music to dance. Choreographing and directing ensembles. Prerequisite: Dance 135S or consent of instructor. One course. *Childs or Dickinson*

146S. Dancing in the Movies. (AL) Dance styles as they have evolved in American cinema from the choreography of Charlie Chaplin to the geometric chorus lines of Busby Berkeley to the glorious partnership of Astaire and Rogers. The evolution of the musical extravaganzas of such dancers as Gene Kelly and Michael Kidd to the sleek jazz of Bob Fosse and Jerome Robbins, and the choreographed battles of Kung Fu flicks. One course. *Sommer*

151. Functional Anatomy for Dancers. (AL) The functional anatomy of the musculoskeletal system (muscles, bones, and joints) as specifically applied to dance technique approached through observation, analysis, and movement exploration. Concepts of efficient use and questions of misuse of the body in motion or at rest. One course. *Staff*

169S. Design for the Theater. Not open to students who have taken the former Drama 169S. Prerequisite: Drama 93 or consent of instructor. See C-L: Drama 161S. One course. *Ma*

181. Special Topics. Content to be determined each semester. Consent of instructor required. One course. *Staff*

181S. Special Topics. Content to be determined each semester. Consent of instructor required. One course. *Staff*

182S. Choreography. (AL) Advanced study in dance composition designed to develop the student's personal mode of expression. Prerequisites: Dance 135S, Dance 136S, and consent of instructor. One course. *Childs, Dickinson, or Taliaferro*

188S. The Diaghilev Ballet, 1909-1929. (AL) The Diaghilev Ballet as a focal point for modernist movements in the arts and a revitalizing force for ballet that brought together choreographers Fokine, Nijinsky, Massine, Nijinska; composers Stravinsky, Ravel, Debussy, Satie; artists Bakst, Benois, Picasso, Braque. Prerequisite: junior or senior standing or consent of the instructor. One course. *Dickinson and staff*

189S. Dance Criticism: From Stage to Page. (AL) The theories and practicalities of how to look at and write about dance performance, ranging from ballet and modern dance to Step shows, clubs, and postmodern performance art. One course. *Sommer*

191, 192. Independent Study. Individual intensive research or creative projects. Consent of instructor required. Half or one course. Variable credit. *Staff*

200. Senior Project. (AL) A research paper, project, or program (with appropriate written documentation) under dance faculty supervision. Open only to seniors earning a certificate in dance. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

65. Beginning Improvisation

130. Inter-Arts: Theory and Practice. (AL)

134. Creative Movement for Children

197. Aesthetics of Twentieth-Century Dance. (AL)

198. Sacred Dance. (AL)

Distinguished Professor Courses (DPC)

Distinguished professor courses enable students, regardless of their majors, to study with some of the most outstanding teachers and scholars within the university. The courses often focus on topics of broad intellectual and academic interest beyond the scope of a single discipline. They may count toward the appropriate distributional requirements as indicated.

180S. Heroes and Heroism Across Cultures. (AL) A cross-cultural, comparative study of myths that narrate the deeds of a "culture-hero"—a divine or semidivine figure of either sex who is credited with the invention and/or maintenance of crucial institutions of a particular culture. Themes and motifs that are recurrent and widespread over a broad spectrum of cultures. Focus on myth cycles from the ancient societies of the Near East and the Mediterranean; material from traditional African and North American (pre-Columbian) societies. Also taught as Classical Studies 180S. One course. *Davis*

190S. The Pagan World of the Divine Comedy. (AL) Dante's *Commedia* and the texts that place it in a context: the history of thirteenth-century Florence and Dante's life; his other major works (the *Vita Nuova* and *De Monarchia*); the pagan poets whom Dante incorporated into his *Commedia* (Vergil, Ovid, Lucan, and Statius) and the Christian theory of biblical

criticism that gave St. Augustine his perspective on pagan poets. C-L: Classical Studies 116S and Medieval and Renaissance Studies. One course. *Clay*

192. French Existentialism: 1940-1960. (CZ) A critical introduction to the chief positions and controversies of French existentialism. Taught in English. One course. *Mudimbe*

197S. The Family in Christian History. (CZ) Ideas about and practices concerning the family, sexuality, and reproduction, from the first through the twentieth centuries of Christian history. Open to sophomores, juniors, and seniors. Consent of instructor required. C-L: Religion 190S and Women's Studies. One course. *Clark*

200S. Democracy and American Foreign Policy. (SS) Focuses on an issue that has been widely debated by statesmen and scholars: Are democracies at an inherent disadvantage in the conduct of foreign relations? Case studies on important American foreign policy undertakings serve as a major source of reading and discussion. Open to juniors and seniors who have not taken Political Science 200D,S.11; also taught as Political Science 200D,S.11. Consent of instructor required. One course. *Holsti*

202S. What It Means to Be Human. (SS) What natural and humanistic sciences, and also philosophy and theology, have to say about the distinctive character of human beings. Prerequisite: junior or senior standing. One course. *Langford*

207S. Topics in Psychobiology. (NS, SS) The biological substrates of human behavior in health and disease. Drug abuse, alcoholism, depression, schizophrenia, and human aggression. Films and videotapes. Student presentations; patient interviews. Prerequisites: senior standing, Psychology 49S (Psychobiology), and consent of instructor. C-L: Psychology 207S. One course. *Brodie*

COURSES CURRENTLY UNSCHEDULED

198S. The Discovery of the Old World: Utopias Ancient and Modern. (AL)

222. Reading Milton. (AL)

Documentary Studies

See the chapter "Special Study Centers, Programs, and Opportunities" for information on courses in documentary studies.

Drama Program (DRA)

Professor of the Practice Riddell, *Director of the Program*; Associate Professor of the Practice McAuliffe, *Director of Undergraduate Studies*; Professors of the Practice Clum and Randall; Associate Professor of the Practice Storer; Assistant Professors of the Practice Blackadder, Ma, Voss, and Wilson; Adjunct Assistant Professor of the Practice Catotti; Adjunct Professor Azenberg; Instructors Froeber, Hemphill, Lopez-Barrantes, Morris, Schilling, and West

A major or a minor is available in this program.

The program in drama seeks to educate students in the historical and creative aspects of the theater. Drama courses are designed to give majors a broad background necessary for advanced professional or scholarly work and to offer nonmajors the opportunity to deepen their understanding and appreciation of the theater. Guiding the work of the faculty is the belief that the theater is a collaborative art form that reaches out to other disciplines. Emphasis is placed on classwork, studio projects, and production opportunities. To keep students abreast of the changing nature of theater, resident professionals and visiting artists regularly hold workshops, teach classes, and participate in the production program.

INTRODUCTORY COURSES

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

91. The Theater. (AL) An introduction to the study of theater. Aspects of play production, text analysis, and an introduction to the key periods in the history of theater (Classical Greek, English Renaissance, Modern European, and Contemporary), including close analysis of four representative plays. Requires involvement with one Drama Program production. Not open to students who have taken Drama 51. C-L: English 94. One course. *Clum or Riddell*

93. Theater Production and Management. (AL) Fundamentals of theater technology and production. Focus is on familiarity with theater spaces and the areas of production (scenery, costumes, lighting, sound, props, and stage management) as well as on a working knowledge of techniques and organizational methods specific to theater. Laboratory requirement. Not open to students who have taken Drama 71 or 186. C-L: Dance 75. One course. *Catotti*

99S. Introduction to Performance. (AL) Storytelling and exploration of the self including: movement, voice, imaginative work, and the basic actor's vocabulary. Scene work. The process of acting will be studied from in-class work and observation of Drama Program productions. Course geared to the student with little or no experience in acting. One course. *Hemphill, Morris, Schilling, Storer, or West*

OTHER UNDERGRADUATE COURSES

102. Classical to Neoclassical. (AL) Greek tragedy and comedy, Roman comedy, medieval and Renaissance drama, Restoration drama and drama of France's Golden Age. C-L: English 174A. One course. *Blackadder or Clum*

103. Toward and Beyond Realism. (AL) Ibsen, Strindberg, Chekhov, Shaw, Pirandello, Brecht, Lorca, and other leading modern playwrights through 1960. C-L: English 174B. One course. *Blackadder or Clum*

104. American Drama: O'Neill to the Present. (AL) Representative plays by O'Neill, Odets, Miller, Williams, Albee, and leading contemporary playwrights. C-L: English 162. One course. *Clum*

105. British Drama: Wilde to the Present. (AL) Shaw, Pinter, Beckett, Stoppard, and others to the present. C-L: English 133. One course. *Blackadder or Clum*

107S. Twentieth-Century Women Playwrights. (AL) Stein, Hellman, Terry, Wertembaker, Egloff, Churchill, Fornes, and others. Not open to students who have taken Drama 125S. C-L: Women's Studies. One course. *McAuliffe*

108S. The Comedies of Shakespeare. (AL) See C-L: English 129A. One course. *Randall*

109S. The Tragedies of Shakespeare. (AL) See C-L: English 129B. One course. *Randall*

111. The Musical. (AL) History of the American musical theater from its origins to the present. Fundamentals of theater music and lyrics. Close study of representative works by Kern, Porter, Gershwin, Rodgers, and Sondheim. C-L: Music 164. One course. *Clum*

117S. Theater in London: Text. (AL) (London summer program.) Not open to students who have taken the former Drama 149S. See C-L: English 176B. One course. *Blackadder or Clum*

118S. Special Topics in Dramatic Literature, History, Theory, or Criticism. (AL) May be repeated for credit. One course. *Staff*

119. Special Topics in Drama in England. (AL) Dramatic literature, theater history, criticism, practical theater, or film. (Taught in Bristol, England.) Also taught as English 176A. Variable credit. *Clum and staff*

121S. Dramatic Writing. (AL) Fundamentals of writing for stage and screen. Open to sophomores, juniors, and seniors; recommended for, but not limited to, students who have taken English 100B. Not open to students who have taken the former Drama 111S. Prerequisites: a practical theater course (for example, acting, directing, design, stagecraft) and consent of instructor. C-L: English 107S and Film and Video. One course. *Wilson*

122S. Advanced Dramatic Writing. (AL) Advanced projects in writing for production. Not open to students who have taken the former Drama 112S. Prerequisites: Drama 121S and consent of instructor. C-L: English 108S and Film and Video. One course. *Wilson*

123S. Screenwriting. (AL) Advanced writing projects for feature film. Study of existing scripts and videos, application of techniques. Consent of instructor required. Not open to students who have taken Drama 113S. C-L: English 102S and Film and Video. One course. *Wilson*

131S. Acting. (AL) Text analysis from the actor's point of view, preparation, emotional technique, voice, and movement. Scene work with focus on modern and contemporary texts. Not open to students who have taken the former Drama 101S. Consent of instructor required. One course. *McAuliffe or Storer*

132S. Advanced Acting: Classical Texts. (AL) Scansion, breath work, text analysis, arch, emphasis, the heroic character, style, period movement, and theatricality of choices which illuminate language. Selected texts from Shakespeare and seventeenth-century playwrights. Scene work. Not open to students who have taken the former Drama 102S. Prerequisites: Drama 131S and consent of instructor. One course. *McAuliffe*

133S. Advanced Acting: Contemporary Texts. (AL) Scene study. Examination and development of performance choices. Studies based on reading and practice of chosen contemporary texts. Use of the script as the primary source for actor's choices. Not open to students who have taken the former Drama 103S. Prerequisites: Drama 131S and consent of instructor. One course. *McAuliffe or Storer*

136S. Voice and Speech. (AL) Vocal production and articulation. Phonetics, control, emotional response, projection, placement, and awareness of regionalisms. Not open to students who have taken the former Drama 105S. Prerequisites: Drama 131S and consent of instructor. One course. *Lopez-Barrantes or Morris*

138S. Theater in London: Performance. (AL) (London summer program.) Not open to students who have taken the former Drama 148S. See C-L: English 176C. One course. *Blackadder or Clum*

140S. Directing. (AL) Establishment of basic skills of information communication from script to stage to audience; analyzing texts from a director's point of view; basic stage articulation of viewpoint; development of skills in mechanics and staging techniques. Emphasis on scripts of poetic realists. Not open to students who have taken the former Drama 181S. Prerequisites: Drama 99S or 131S and consent of instructor. One course. *McAuliffe or Storer*

142S. Film and Video Theory and Practice. (AL) Prerequisite: Drama 173, English 101A, Literature 110, or Literature 114. See C-L: Film and Video 100S; also C-L: English 183S. One course. *Burns*

151S. Directors/Actors Workshop. (AL) Examination of rehearsal working methods and development of performance choices with emphasis on modern and contemporary scripts.

Not open to students who have taken Drama 182S. Prerequisites: Drama 131S or 140S and consent of instructor. One course. *McAuliffe*

152A. Musical Theater Workshop: Writing. (AL) The writing of book, lyrics, and music for short original musicals. Culminates in a performance of the works created by the class. Prerequisite: Music 55 or playwriting. One course. *Clum*

152B. Musical Theater Workshop: Performance. (AL) Work on singing musical theater songs, movement, comedy techniques. Culminates in a performance of musicals written by the students in Drama 152A. Prerequisite: Drama 99S. One course. *Clum*

159S. Special Topics in Theatrical Collaboration. (AL) May be repeated for credit. One course. *Staff*

161S. Design for the Theater. (AL) Basic design principles and techniques for the three primary stage design areas: scenery, costumes, and lighting, with an introduction to sound design. Aesthetic and analytical skills, design appreciation, drafting ground plans, light plots, model building, and costume rendering. Laboratory requirement. Not open to students who have taken the former Drama 169S. Prerequisite: Drama 93 or consent of instructor. C-L: Dance 169S. One course. *Ma*

163S. Producing in America. (AL) The history and organization of profit and nonprofit theater in America. Methods and techniques for establishing and maintaining theater organizations. Practical application in connection with Drama Program productions. Not open to students who have taken Drama 185S. One course. *Voss*

164. Broadway Production. (AL) Aspects of producing Broadway shows, from script selection to final production, including marketing techniques. Not open to students who have taken Drama 187. Half course. *Azenberg*

167. Asian Art and Theater. (AL) The social, philosophic, and artistic content of Asian visual arts and their relationship to theater from historical and practical points of view. C-L: Asian and African Languages and Literature 167. One course. *Ma*

170. Drama of Greece and Rome. (AL) See C-L: Classical Studies 106. One course. *Burian or Clay*

171. French Drama of the Seventeenth Century. (AL, FL) See C-L: French 148; also C-L: Medieval and Renaissance Studies. One course. *Longino*

172. French Drama of the Twentieth Century. (AL, FL) See C-L: French 162. One course. *Tufts*

173. Introduction to Film. (AL) See C-L: English 101A; also C-L: Film and Video and Literature 110. One course. *Gaines*

174. Studies in Film History. (AL) See C-L: English 185; also C-L: Film and Video and Literature 116. One course. *Clum, Gaines, or Jameson*

175S. The Italian Theater. (AL, FL) Taught in Italian. See C-L: Italian 151S. One course. *Finucci*

176. Melodrama and Soap Opera. (AL) Not open to students who have taken Drama 137. See C-L: English 187; also C-L: Film and Video and Women's Studies. One course. *Clum or Gaines*

177S. Chekhov. (AL) Not open to students who have taken Drama 157S/Russian 174S (Chekhov). See C-L: Russian 177S; also C-L: Comparative Area Studies. One course. *Flath and staff*

178S. Special Topics in Film. (AL) Not open to students who have taken the former Drama 197S. Prerequisite: Drama 173 or English 101A. See C-L: English 189S; also C-L: Film and Video. One course. *Clum, Gaines, or Moses*

179. The History of Performance Art. (AL) Not open to students who have taken Art 179. See C-L: Art History 179; also C-L: Comparative Area Studies and Women's Studies. One course. *Stiles*

182, 183. Shakespeare. (AL) Not open to students who have taken Drama 115, 116. See C-L: English 143, 144; also C-L: Medieval and Renaissance Studies. One course each. *DeNeef, Goldberg, Gopen, Jones, Porter, or Randall*

189S. Majors' Seminar: The Theater Today. (AL) Team-taught course on the current state of American drama and theater and its relation to American society. Theater as a vocation and avocation. Guest speakers and presentations. Open only to drama majors. One course. *Staff*

191, 192, 193, 194. Independent Study. Individual intensive research or creative projects. Half or one course. Consent of instructor required. Variable credit. *Staff*

195, 196. Special Topics. Illustrative examples: specific writers or other theater artists, media studies, styles, mime, masks, clowns, stage fighting, newspaper criticism, studies of the profession, audition techniques, and theater periods. May be taken more than once. Half course, one course, respectively. *Staff*

195S, 196S. Special Topics. Seminar versions of Drama 195 and 196. May be taken more than once. Half course, one course, respectively. *Staff*

197-198. Senior Distinction Project. (AL) One course, half course, respectively. Consent of instructor required. Variable credit. *Staff*

220S. German Theater as Anti-Drama. (AL, FL) See C-L: German 233S. One course. *Alt*

225. Renaissance Drama: 1500 to 1642. (AL) See C-L: English 225; also C-L: Medieval and Renaissance Studies. One course. *Goldberg, Porter, and Randall*

THE MAJOR

The major in drama offers students a grounding in (1) the history of theater and dramatic literature, and (2) the interrelated disciplines of the art of theater, for example, acting, design, directing, playwriting, and technical production. Students completing the major will be prepared for either graduate study, advanced theater training, or entry-level work in the profession.

Major Requirements. Ten courses, including Drama 93, 102, 103, 121S, 131S, 140S, 161S, 189S, and two additional 100-level courses in dramatic literature, history, theory, or criticism.

THE MINOR

The minor requires five courses, including Drama 93, and four 100-level courses which include at least two in dramatic literature, criticism, theory, or history, and one in theater production.

HONORS/DISTINCTION

Students pursuing graduation with distinction in drama must have a *B* average in drama courses to be eligible. They should contact the director of undergraduate studies during the semester prior to their last two semesters to propose a project pursuing a subject in-depth and name a project supervisor (a full-time faculty member in the area in which the

student will pursue the project). This project may be an extended research paper in dramatic literature, theory, criticism, or theater history; a play in playwriting; a performance and production book in acting; a production and production book in directing. The director of undergraduate studies and the proposed project supervisor will consider the project for approval. The director of undergraduate studies will contact the program director for approval when the project will culminate in a production. After receiving approval from the director of undergraduate studies and the supervisor, the student will register for Drama 197 (one course) with the supervisor during the first semester of the final year and Drama 198 (one half course weekly tutorial with the supervisor) during the final semester. The project will be evaluated by the supervisor and the director of undergraduate studies.

Three levels of distinction in drama will be recognized: "Highest Distinction," "High Distinction," and "Distinction."

Ecology

For courses in ecology, see Biology, Environment (School), and Environmental Sciences and Policy Program.

Economics (ECO)

Professor McElroy, *Chair*; Professor Grabowski, *Director of Undergraduate Studies*; Professors Clotfelter, Cook, De Marchi, Goodwin, Graham, Kelley, Kimbrough, Ladd, Moulin, Sloan, Smith, Tauchen, Tower, Trembl, Vernon, Weintraub, and Yohe; Associate Professors Conrad, Kramer, Leitzel, and Zhou; Assistant Professors An, Coppejans, Crawford, Hamilton, Peretto, Sieg, and Yang; Professors Emeriti Blackburn, Bronfenbrenner, Davies, Kreps, and Wallace; Research Professors Burmeister and Toniolo; Adjunct Professor Gallant; Adjunct Associate Professor Zarkin

A major or minor is available in this department.

Economics courses develop the critical and analytical skills essential for understanding economic problems and institutions, in both their contemporary and historical settings. Although no particular vocational or professional goal is emphasized, these courses provide the academic background necessary for positions in industry, for work in many branches of government service, for law school, and for graduate study in business administration, economics, and the social sciences.

Students planning to do graduate work in economics are advised to take as many of the following courses in mathematics (listed in preferential order) as their schedules permit: Mathematics 31, 32, 103, 104, 131, 135, and 136.

1A. Introductory Macroeconomics. Credit for Advanced Placement on the basis of a score of 4 or 5 on the Advanced Placement Macroeconomics examination. One course.

1D. National Income and Public Policy. (SS) Basic economic analysis emphasizing current public policy issues. Means of determining the level and rate of growth of aggregate national income and output. Causes of unemployment, inflation, and international payment problems. The effects of monetary policy (money supply and interest rates) and fiscal policy (government expenditures and taxes) on these problems. For freshmen; upperclassmen only by consent of instructor. One course. *Staff*

2A. Introductory Microeconomics. Credit for Advanced Placement on the basis of a score of 4 or 5 on the Advanced Placement Microeconomics examination. One course.

2D. Competition, Monopoly, and Welfare. (SS) The composition of output and the distribution of income in a market economy. Role of government. Contemporary problems. Topics such as environmental economics, monopoly, unionism, international trade. Comparison of a market economy with other systems of economic organization. Economic problems of developing countries. Open only to freshmen. One course. *Staff*

- 2S. Competition, Monopoly, and Welfare.** (SS) Seminar version of Economics 2D. Open only to freshmen. Consent of instructor required. One course. *Weintraub*
- 49S. First-Year Seminar.** Topics vary each semester offered. One course. *Staff*
- 51D. National Income and Public Policy.** (SS) For description see Economics 1D. Open to all students. May be taken before or after Economics 2D or 52D. One course. *Staff*
- 52D. Competition, Monopoly, and Welfare.** (SS) For description see Economics 2D. Open to all students. May be taken before or after Economics 1D or 51D. One course. *Staff*
- 53. Economics of Contemporary Issues.** (SS) Modern economic problems, such as environmental deterioration and urban decay. The market as one of the interrelated subsystems of the social system, from institutionalist, Marxist, and other perspectives in the social sciences. One course. *Staff*
- 60. Economics of a United Europe.** (SS) Implications of a common monetary policy, common welfare standards, unemployment, and migration in the European Union. (Taught only in the Duke-in-Berlin Program.) One course. *Tolksdorf*
- 66. International Economics.** (SS) Global trade, trade restrictions, monetary systems, exchange rates, and economic development. Applications to the European Union, the United States, and the developing world. (Taught only in the Duke-in-Madrid Program.) Prerequisite: Economics 1 or 51 or 2 or 52. One course. *Allard*
- 67. Comparative Economic Systems.** (SS) Economic institutions in modern industrial economies and the third world. Managing and evaluating an economic system. Ideologies and approaches to the use of market and economic planning in the former Soviet Union and Yugoslavia, the United States, and the European Union. (Taught only in the Duke-in-Madrid Program.) Current issues. One course. *Allard*
- 83. Financial Accounting and Decision Making.** (SS) The accounting model of the firm, transaction analysis, the use of accounting information by management. Topics include procedures to process accounting data, income determination, financial statement analysis, cost behavior, budgeting, and short-run decisions. Not open to students who have taken Management Sciences 53. Does not count for economics major or minor requirements. One course. *Staff*
- 98. Introduction to Canada.** (SS) Does not count for economics major or minor requirements. See C-L: Canadian Studies 98; also C-L: Comparative Area Studies, History 98, Political Science 98, and Sociology 98. One course. *Thompson*
- 115. Introduction to North America.** (CZ, SS) Does not count toward the economics major or minor requirements. See C-L: North American Studies 110; also C-L: Cultural Anthropology 129, History 108F, Political Science 119, Public Policy Studies 115, Romance Studies 125, and Sociology 109. One course. *Shanahan*
- 130. The Changing Role of the Market in the Social System.** (SS) Comparison of the different perspectives on the role of the market in the social system, from libertarian to Marxian. Application of the tools of analysis of market behavior to seemingly noneconomic problems such as crime and environmental decay. Prerequisites: Economics 1 or 51, and 2 or 52. One course. *Staff*
- 132. Introduction to Economic History.** (CZ, SS) A survey of Western economic history: population, production, exchange, and institutions; from antiquity to the present. Prerequisite: Economics 2 or 52. One course. *Staff*

133. The Evolution of the American Economy. (SS) The process of industrialization and modernization in the United States from the pre-Civil War period to the present. Prerequisites: Economics 1 or 51, and 2 or 52. One course. *Staff*

134. Japanese Economy and Its History. (SS) Japanese economic development since the end of isolation, in the mid-nineteenth century. Prerequisite: one course in economics or Far Eastern history. One course. *Bronfenbrenner*

139. Introduction to Econometrics. (QR) Data collection, estimation, and hypothesis testing. Use of econometric models for analysis and policy. Prerequisites: Economics 2 or 52, Mathematics 32 or equivalent, and statistics. One course. *McElroy, Tauchen, or Wallace*

140. Comparative Economic Systems. (SS) A strategic analysis of the new economics of the Soviet Union, China, and Eastern Europe as well as the socioeconomic, political systems of the United States, Japan, Sweden, and other capitalistic countries. Prerequisites: Economics 1 or 51, and 2 or 52. C-L: Comparative Area Studies. One course. *Trem*

142S. Chinese Economy in Transition. (SS) Evolution of the Chinese economy since 1949. Exposition of alternative economic systems, the commune, incentive problems, and state enterprises. Analysis of recent reforms and their effects on economic efficiency: agricultural growth, changes in ownership structures, financial markets, reforms and inflation, privatization, gradualism, and shock treatment. Through a research project students develop expertise in one aspect of the Chinese economy. Prerequisites: Economics 1 or 51, and 2 or 52. C-L: Public Policy Studies 142S. One course. *Yang*

145. The Soviet Economy and Its Collapse. (SS) Historical development and structure of command-administrative system. Gorbachev's perestroika. The transition from plan to market. One course. *Trem*

148. History of Economic Thought. (SS) Approaches to economic problems from Aristotle to Keynes, emphasizing certain models and doctrines—their origins, relevance, and evolution. Readings from Mun, Quesnay, Adam Smith, Malthus, Ricardo, Marx, Walras, Veblen, and Keynes. Not open to students who have taken the course as Economics 150. Prerequisites: Economics 1 or 51 and 2 or 52. C-L: Comparative Area Studies. One course. *De Marchi or Goodwin*

149. Microeconomics. (SS) Cost and supply considerations in price theory; the demand for factors of production. The allocation of resources in the context of competitive and monopolistic market structures. Not open to students who have had Public Policy Studies 110. Prerequisites: Economics 2 or 52, and Mathematics 26L or 31 or 31L. One course. *Graham, Trem, or Vernon*

151. Adam Smith and the System of Natural Liberty. (SS) The writings of Adam Smith, including close readings of *The Wealth of Nations* and *The Theory of Moral Sentiments*, and selections from Mandeville, Hutcheson, Hume, Quesnay, Turgot, and Bentham. Focus on eighteenth-century views on the nature of society and the origins of prosperity, the luxury debate, and links between natural philosophy (including medical thought), and moral philosophy. One course. *Staff*

152. Mercantile Culture and Art in the Netherlands. (CZ) Not open to students who have taken Art 155. See C-L: Art History 155. One course. *De Marchi and Van Miegroet*

153. Money and Banking. (SS) The evolution and operations of commercial and central banking and nonbanking financial institutions in the United States, the determination of monetary aggregates and interest rates, the financial impacts of Treasury operations, and the linkages from Federal Reserve actions to price level, employment, economic growth, and balance of payments objectives. Prerequisite: Economics 154. One course. *Yohe*

154. Macroeconomics. (SS) Concepts and measurement of national income and expenditures, employment, interest rates, and price levels; the theoretical determination of these aggregates; applications of macroeconomic theory to business cycles and economic growth. Prerequisites: Economics 1 or 51, 2 or 52, and Mathematics 26L or 31 or 31L. One course. *De Marchi, Kimbrough, or Yohe*

154L. Macroeconomics. (QR, SS) Same as Economics 154, except includes a weekly computer lab. Microsoft Excel used to estimate economic models using regression analysis and to simulate linearized economic models using matrix methods. Not open to students who have taken Economics 154. Prerequisites: Economics 1 or 51, 2 or 52, and Mathematics 26L or 31 or 31L. One course. *Tower*

155S. Labor Economics: Analysis and Measurement. (SS) Labor market equilibria. The demand for labor. The supply of labor: human fertility, human capital, hours of work, and labor force participation. Wage levels and differences. Union and government as labor market factors. Prerequisites: Economics 149, Mathematics 26L or 31 or 31L, and statistics. One course. *McElroy or Yang*

156. Health Economics. (SS) Economic aspects of the production, distribution, and organization of health care services, such as measuring output, structure of markets, demand for services, pricing of services, cost of care, financing, mechanisms, and their impact on the relevant markets. Prerequisite: Economics 149 or Public Policy Studies 110. C-L: Public Policy Studies 156. One course. *Sloan*

157S. Business Cycles and Economic Forecasting. (SS) Causes of fluctuations in economic activity and conventional methods of forecasting micro- and macroeconomic variables, using microcomputer programs. Forecasting projects by students. Prerequisites: Economics 149, 154, and Statistics 110B. One course. *Yohe*

158. Financial Markets and Investments. (SS) The tools learned in microeconomics, macroeconomics, basic mathematics, and statistics applied to problems in financial economics. A blend of pure economic theory, an investigation of financial data, and practical applications using personal computers. Prerequisites: Economics 149, Economics 154, and a statistics course—preferably Statistics 110B or 210B. One course. *Burmeister*

161S. Economics of Slavery in the American South. (SS) Examines how modern economic analysis is helpful in understanding the nature and development of a slave economy, society, and culture. Combines the study of economic development and comparative economic systems. Prerequisite: Economics 149. C-L: African and African-American Studies 161S and History 140S. One course. *Staff*

163. Economics of the Environment. (SS) Role of economic methods in evaluating the use and abuse of environmental resources. Focus on characteristics of resources that influence efficient allocation decisions. Current case studies used to develop relevant microeconomics such as natural resource damage assessment, auctions for pollution permits, trade, and the environment. Prerequisite: Economics 52. One course. *Smith*

164. Formulating Macroeconomic Concerns, 1936-86. (SS) How social and political concerns, ideals of fairness, the availability of appropriate quantitative information, and modeling techniques shaped the way macroeconomic issues were perceived during this period, principally in the United States. Evolutionary case studies of selected issues—inflation/deflation, unemployment, the incentives-security complex, markets, and taxation, distribution, and growth—to understand the changing contexts within which models have been conceived and thought to be applicable. Prerequisite: (or corequisite) Economics 154. One course. *De Marchi*

165. American International Economic Policy. (SS) Topics include United States trade policies and protectionism, the North American Free Trade area, trade and economic relations with industrialized countries, policies toward developing countries and multilateral institutions, macroeconomic policy coordination, and relations with Europe. Prerequisites: Economics 1 or 51 and 2 or 52. C-L: Public Policy Studies 165. One course. *Bronfenbrenner*

167. Multinational Management. (SS) Economic, political, and legal variables which influence the form of organization. Multinational enterprise and foreign direct investment. Prerequisite: Economics 149. One course. *Staff*

171S. Behavioral and Experimental Economics. (SS) The relationship between actual behavior and economic models. Topics include individual decision-making behavior, game theory, and the role of market institutions. The interaction of economic and psychological theory. Students have the opportunity to participate in, and conduct, economic experiments. Prerequisite: Economics 149 or consent of instructor. One course. *Staff*

173. Economics of Organization and Management. (SS) Coordination and motivation issues within a corporation along with the internal design and dynamics of organizations. Topics include the structure of employment contracts, performance incentives, and the pricing of financial assets. Prerequisite: Economics 149. One course. *Staff*

175. Economics of Modern Latin America. (SS) The remarkable shift that has taken place in various countries of Latin America from a statist, import substitution model of development towards a more free-market economy. Emphasis on case studies of individual countries and specific policies including opening markets to foreign trade and investment, privatization, deregulation, creation of private pension systems, and building greater transparency in financial markets. The end of Latin American debt crises and prospects for hemispheric integration. Prerequisites: Economics 1 or 51 and 2 or 52; or consent of instructor. C-L: Comparative Area Studies. One course. *Staff*

180. Law and Economics. (SS) An introduction to the economic analysis of legal issues and legal reasoning. Case studies in accident law, product liability, and the value of life. Other topics include contracts, property, affirmative action, civil procedure, and the economics of criminal behavior. Prerequisite: Economics 149. One course. *Staff*

181. Corporate Finance. (SS) Major corporate decisions from the perspective of the firm with an emphasis on the interaction of the firm with financial markets: project evaluation for investment, choice between borrowing and issuing stock, dividend policy, organizational form (for example, mergers and acquisitions). Introduction to financial markets: issuing stocks, analyzing financial performance, and options. Prerequisites: Economics 1 or 51, 2 or 52; Economics 149 and some statistics recommended. One course. *Staff*

183. Agency and Accounting. (SS) The production and use of information in corporate decision making and financial markets. The theory of principals and agents. The relationship between the structure of information flows and incentives within the firm and the impact of that relationship on the firm's operations, organizational form, capital structure, and compensation scheme. How the dissemination of information in capital markets affects asset pricing, financial contracting, and corporate governance. Prerequisite: Economics 149 or 181. One course. *Staff*

184S. Canadian Issues. (SS) Does not count as one of the courses at the 100 level or higher for either of the economics major or minor. Prerequisite: Canadian Studies 98 or consent of instructor. See C-L: Canadian Studies 184S; also C-L: Comparative Area Studies, Cultural Anthropology 184S, History 184S, Political Science 184S, and Sociology 184S. One course. *Staff*

185S. The Canadian Health Care System. (SS) Does not count as one of the courses at the 100 level or higher for either of the economics major or minor. See C-L: Canadian Studies 185S; also C-L: Comparative Area Studies, Cultural Anthropology 185S, History 108E, Political Science 185S, Public Policy Studies 187S, and Sociology 185S. One course. *Warren or staff*

187. Public Finance. (SS) Economic aspects of the allocative and distributive role of government in the economy, the incidence and efficiency of taxation, the effects of taxation on behavior, and analysis of major government spending programs. Prerequisite: Economics 149. One course. *Staff*

188. Industrial Organization. (SS) Economic theories of the behavior of firms within industries. Emphasis upon incentives and the role of information when firms are mutually interdependent. Topics include the agency problem, entry, research and development, collusion, and various pricing schemes. Analysis conducted within a number of regulatory environments. Prerequisites: Economics 149 and statistics, or consent of instructor. One course. *Staff*

189. Business and Government. (SS) Public policies which most directly affect the operation of competition in the business world. The economic basis for an evaluation of antitrust policy, public utility regulation, and public enterprise. Prerequisites: Economics 149 and Statistics 110B, or consent of instructor. One course. *Grabowski or Vernon*

191, 192. Independent Study. Directed reading and research. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

193, 194. Independent Study. Same as Economics 191, 192, but for seniors. One course each. *Staff*

195, 196. Selected Topics in Economics. One course each. *Staff*

199. Political Philosophy and Distributive Justice. (SS) Welfarism: classical utilitarianism versus egalitarianism (Harsanyi versus Rawls). Democratic rights: voting rules and preference aggregation (Arrow's theorem). Liberalism: competitive equilibrium, destructive competition, and inefficient decentralization. Welfarism versus resourcism. Mechanism design and the microeconomic approach to justice. Prerequisites: Economics 1 or 51 and Economics 2 or 52. C-L: Political Science 175A. One course. *Moulin*

For Advanced Undergraduates and Graduates

205S. Advanced Monetary Theory and Policy. (SS) The theory of monetary policy from Keynesian, neoclassical and classical perspectives. Public choice and political economy approaches to monetary policy. The term structure interest rates. Portfolio theory. The theory of the financial services firm. Theories of financial regulatory policy. Prerequisites: Economics 153 and Statistics 110B. One course. *Staff*

207. Models of Conflict and Cooperation. (SS) Cooperative and noncooperative game theory with applications to trading, imperfect competition, cost allocation, and voting. Prerequisites: Economics 149 and Mathematics 26L or 31 or 31L. One course. *Moulin*

208S. Economics of the Family. (SS) Economic functions of families including home production gains from marriage, the demand for children, marriage and divorce, child support and alimony, labor supplies of women and men, the distribution of resources within families ("rotten kid theorems" and cooperative and noncooperative games). Applications to marriage and divorce law, day care, U.S. welfare policy, mortality, and farm efficiency in developing nations. Prerequisites: Economics 149 and Statistics 110B. One course. *McElroy*

215S. Applied Cost Benefit Analysis. (SS) The principles of economic cost benefit analysis applicable to circumstances in which market valuations do not provide adequate measures of social desirability. Socially relevant prices for labor, capital, energy, materials, foreign exchange, and valuation of public goods. Development of analysis for individual projects, extended to cover economic policies. Prerequisite: Economics 149. One course. *Staff*

216S. Economics of Education. (SS) Topics include investment in human capital, return to and demand for education, the production function for schooling, public expenditures on schools, effectiveness of private and public schools, the distribution of public educational expenditures, public financing of higher education, inflation in college costs, and labor markets for teachers and professors. Emphasis on students' research projects. Prerequisite: Economics 149 or Public Policy Studies 110. C-L: Public Policy Studies 216S. One course. *Clotfelter*

218. Macroeconomic Policy. (SS) Does not count for undergraduate economics major requirements. See C-L: Public Policy Studies 218. One course. *Leitzel or McElroy*

219S. Economic Problems of Underdeveloped Areas. (SS) Analysis of underdeveloped countries with attention to national and international programs designed to accelerate development. Prerequisite: Economics 149 or consent of instructor. C-L: Comparative Area Studies. One course. *Kelley or Wallace*

220S. Computer Modeling for Policy Analysis. (SS) Introduction to the use of computer techniques in economic policy evaluation; policy applications to international economics, public finance and development economics; computer analysis of linearized and nonlinear models. Students required to complete a major modeling project. Prerequisites: Economics 149 and Economics 154. One course. *Tower*

225S. Games and Information. (SS) Noncooperative game theory with emphasis upon incomplete/imperfect information and incentive contracting. Applications to insurance (deductibles, coinsurance), labor (piece rates, sharecropping, profit sharing), real estate (commission sales), and law (contingent contracts). Prerequisites: Economics 149 and Statistics 110B. One course. *Graham*

234. Japanese Economy and Its History. (SS) Japanese economic development since the end of isolation, in the mid-nineteenth century. Not open to students who have had Economics 134. Prerequisite: one course in economics or Far Eastern history. One course. *Bronfenbrenner*

239. Introduction to Econometrics. (QR) Data collection, estimation, and hypothesis testing. Use of econometric models for analysis and policy. (Same as Economics 139 but requires additional term paper; not open to students who have taken Economics 139.) Prerequisites: Economics 2 or 52 and Mathematics 32 or equivalent and Statistics 110B. One course. *McElroy, Sieg, Tauchen, or Wallace*

240. Comparative Economic Systems. (SS) Analysis and comparison of basic economic systems; market versus centrally planned economies; decision making, information, property rights (income and control), and incentives. Western industrialized market economies compared with Soviet-type command economies. Analysis of change, reforms, and of economic problems of systems transformation. Not open to students who have taken Economics 140. Prerequisites: Economics 1 or 51, and 2 or 52. C-L: Comparative Area Studies. One course. *Trembl*

242S. Chinese Economy in Transition. (SS) Evolution of the Chinese economy since 1949. Exposition of alternative economic systems, the commune, incentive problems and state enterprises. Analysis of recent reforms and their effects on economic efficiency: agricultural growth, changes in ownership structures, financial markets, reforms and inflation,

privatization, gradualism and shock treatment. Through a research project students develop expertise in one aspect of the Chinese economy. (Same as Economics 142S but requires additional paper; not open to students who have taken Economics 142 or 142S.) Prerequisites: Economics 1 or 51, and 2 or 52. C-L: Public Policy Studies 242S. One course. *Yang*

248. History of Economic Thought. (SS) Approaches to economic problems from Aristotle to Keynes, emphasizing certain models and doctrines—their origins, relevance, and evolution. Readings from Mun, Quesnay, Adam Smith, Malthus, Ricardo, Marx, Walras, Veblen, and Keynes. (Same as Economics 148, but requires additional paper; not open to students who have taken Economics 148 or 150.) Prerequisites: Economics 1 or 51 and 2 or 52. C-L: Comparative Area Studies. One course. *De Marchi or Goodwin*

249. Microeconomics. (SS) Cost and supply considerations in price theory; the demand for factors of production. The allocation of resources in the context of competitive and monopolistic market structures. (Similar to Economics 149 but at a more advanced level; not open to students who have taken Economics 149.) One course. *Graham, Trembl, or Vernon*

250S. Modern Economic Thought. (SS) Selective survey of themes in economic thinking since 1936, including the role of empirical work and of formalization. Prerequisites: Economics 149, 154, and Statistics 110B or consent of instructor. One course. *De Marchi or Weintraub*

251S. Regulation of Vice and Substance Abuse. (SS) Prerequisite: Economics 149 or Public Policy Studies 110. See C-L: Public Policy Studies 251S. One course. *Cook*

253. Econometric Methods. (QR) Econometric and statistical methods for applied economic research. Topics include multivariate regression, hypothesis testing, mean square error criteria, and related subjects. Prerequisites: Economics 139 or 239, Economics 149, or equivalents. Calculus and matrix algebra recommended. One course. *Staff*

254. Macroeconomics. (SS) Concepts and measurement of national income and expenditures, employment, interest rates, and price levels; the theoretical determination of these aggregates; applications of macroeconomic theory to business cycles and economic growth. (Similar to Economics 154 but at a more advanced level; not open to students who have taken Economics 154.) One course. *De Marchi, Kimbrough, or Yohe*

254L. Macroeconomics. (QR, SS) Same as Economics 254, except includes a weekly computer lab. Microsoft Excel used to estimate economic models using regression analysis and to simulate linearized economic models using matrix methods. Similar to Economics 154L but at a more advanced level; not open to students who have taken Economics 154, 154L, or 254. One course. *Tower*

255S. Labor Economics: Analysis and Measurement. (SS) Labor market equilibria. The demand for labor. The supply of labor: human fertility, human capital, hours of work, and labor force participation. Wage levels and differences. Union and government as labor market factors. (Same as Economics 155S, but requires additional paper; not open to students who have taken Economics 155S.) Prerequisites: Economics 149, Mathematics 31, and Statistics 210B or equivalent. One course. *McElroy or Yang*

257S. Business Cycles and Economic Forecasting. (SS) Causes of fluctuations in economic activity and conventional methods of forecasting micro- and macroeconomic variables, using microcomputer programs. (Similar to Economics 157S, but requires an additional assignment. Not open to students who have taken Economics 157S.) One course. *Staff*

258. Financial Markets and Investments. (SS) The tools learned in microeconomics, macroeconomics, basic mathematics, and statistics applied to problems in financial economics. A blend of pure economic theory, an investigation of financial data, and practical applications using personal computers. Not open to students who have had Economics 158.

Prerequisites: Economics 149, Economics 154, and a statistics course—preferably Statistics 110 or 210. One course. *Burmeister or Coppejans*

259S. State and Local Public Finance. (SS) Prerequisite: Public Policy Studies 217 or equivalent. See C-L: Public Policy Studies 259S. One course. *Ladd*

260. Economic Policy Analysis of Nonrenewable Resources. (SS) Prerequisite: Economics 149, Public Policy Studies 110, or Public Policy Studies 232. See C-L: Public Policy Studies 260. One course. *Conrad*

261. Evaluation of Public Expenditures. (SS) Not open to students who have taken Economics 285. See C-L: Public Policy Studies 261; also C-L: Environment 272. One course. *Conrad*

262S. Seminar in Applied Project Evaluation. (SS) Prerequisite: Economics 285 or Public Policy Studies 261. See C-L: Public Policy Studies 262S. One course. *Conrad*

263. Environmental Economics: Theory and Application. (SS) Role of materials and energy balances in modeling production and consumption; externalities and Pigouvian taxes; property rights and open access resources; role of market structure; design of policy instruments and actual practice; contrasts between domestic and international environmental policies. Prerequisite: Economics 149. C-L: Environment 263. One course. *Smith*

265. International Economics. (SS) Fundamental principles of international economic relations. The economic basis for international specialization and trade, the economic gains from international trade and investment, the balance of payments, international finance, and the international monetary system. Prerequisites: Economics 149 and 154. C-L: Canadian Studies. One course. *Bronfenbrenner, Kimbrough, or Tower*

266S. Current Issues in International and Development Economics. (SS) Emphasis on individual research projects. Prerequisite: Economics 149, 154. One course. *Kimbrough or Tower*

267. Multinational Management. (SS) Economic, political, and legal variables which influence the form of organization. Multinational enterprise and foreign direct investment. (Same as Economics 167 but requires an additional paper; not open to students who have taken Economics 167.) Prerequisite: Economics 149. One course. *Staff*

269. Microeconomic Analysis. (SS) The basic tools for using microeconomic analysis to address practical economic problems. Topics include consumption, production, externalities, partial equilibrium, and general equilibrium. Applications drawn from labor markets, public goods, cost/benefit analysis, and optimal taxation. The level of the course is between intermediate microeconomics (Economics 149/249) and the core Ph.D. microeconomics sequence (Economics 301/302). One course. *Yang*

270. Resource and Environmental Economics. (SS) Prerequisite: introductory course in microeconomics. See C-L: Environment 270; also C-L: Public Policy Studies 272. One course. *Kramer*

271S. Behavioral and Experimental Economics. (SS) The relationship between actual behavior and economic models. Topics include individual decision-making behavior, game theory, and the role of market institutions. The interaction of economic and psychological theory. Students will have the opportunity to participate in, and conduct, economic experiments. (Same as Economics 171 but requires an additional paper; not open to students who have taken Economics 171.) Prerequisite: Economics 149 or consent of instructor. One course. *Staff*

272. Economic Analysis of Resource and Environmental Policies. (SS) Prerequisite: Environment 270 or equivalent; Economics 149 recommended. See C-L: Environment 271. One course. *Staff*

275. Economics of Modern Latin America. (SS) The remarkable shift that has taken place in various countries of Latin America from a statist, import substitution model of development towards a more free-market economy. Emphasis on case studies of individual countries and specific policies including opening markets to foreign trade and investment, privatization, deregulation, creation of private pension systems, and building greater transparency in financial markets. The end of Latin American debt crises and prospects for hemispheric integration. (Same as Economics 175, but requires an additional paper; not open to students who have taken Economics 175.) Prerequisites: Economics 1 or 51 and 2 or 52; or consent of instructor. C-L: Comparative Area Studies. One course. *Staff*

281. Corporate Finance. (SS) Same as Economics 181, but requires an additional paper; not open to students who have taken Economics 181. One course. *Staff*

282S. Canada. (SS) See C-L: Canadian Studies 282S; also C-L: Comparative Area Studies, Cultural Anthropology 282S, History 282S, Political Science 282S, and Sociology 282S. One course. *Thompson or staff*

283. Agency and Accounting. (SS) The production and use of information in corporate decision making and financial markets. The theory of principals and agents. The relationship between the structure of information flows and incentives within the firm and the impact of that relationship on the firm's operations, organizational form, capital structure, and compensation scheme. How the dissemination of information in capital markets affects asset pricing, financial contracting, and corporate governance. (Same as Economics 183, but requires additional paper. Not open to students who have taken Economics 183.) Prerequisite: Economics 149/249 or 181. One course. *Staff*

284S. American Financial Development and History. (SS) Development of American financial institutions and markets from the colonial period to the present. The political, economic, and institutional factors which influenced that evolution and the theoretical implications for contemporary emerging markets. Prerequisite: Economics 181 or consent of instructor. One course. *Staff*

286S. Economic Policy-Making in Developing Countries. (SS) See C-L: Public Policy Studies 286S; also C-L: Comparative Area Studies. One course. *Conrad or Ramachandran*

287. Public Finance. (SS) Economic aspects of the allocative and distributive role of government in the economy, the incidence and efficiency of taxation, the effects of taxation on behavior, and analysis of major government spending programs. Not open to students who have had Economics 187. (Taught concurrently with Economics 187 but requires additional graduate-level work.) Prerequisite: Economics 149. One course. *Sieg*

288S. Current Issues in United States Federal Tax Policy. (SS) Evaluation of the equity and efficiency of United States tax policy. Topics include: (1) personal consumption versus income taxation and (2) restructuring the taxation of corporate income. Emphasis on the effects of taxes on savings, investment, and the international economy. Prerequisite: Economics 149 or consent of instructor. C-L: Public Policy Studies 288S. One course. *Sieg*

292S. Issues in the Transition of Economic Systems. C-L: Comparative Area Studies. One course. *Leitzel*

293S. Soviet Economic History. (SS) From 1917 through the present. Foundations of the command economy—rejection of markets, central planning, industrialization, collectivization of agriculture; economic reforms and search for economic efficiency. Gorbachev's

perestroika and the dissolution of the Soviet Union. C-L: Comparative Area Studies. One course. *Trem*

294S. Soviet Economic System. (SS) Economic planning and administration in the Soviet Union. Theoretical and applied problems of resource allocation, economic development, and optimal micro decision making in a nonmarket economy. Gorbachev's perestroika, search for a new model, and the collapse of the Soviet system. C-L: Comparative Area Studies. One course. *Trem*

295, 296. Selected Topics in Economics. (SS) One course each. *Staff*

299. Political Philosophy and Distributive Justice. (SS) Welfarism: classical utilitarianism versus egalitarianism (Harsanyi versus Rawls). Democratic rights: voting rules and preference aggregation (Arrow's theorem). Liberalism: competitive equilibrium, destructive competition, and inefficient decentralization. Welfarism versus resourcism. Mechanism design and the microeconomic approach to justice. (Similar to Economics 199, but requires an additional assignment. Not open to students who have taken Economics 199.) One course. *Moulin*

Honors Seminars (by invitation only)

201S, 202S. Current Issues in Economics. (SS) Economic analysis of such issues as the health care system, crime and punishment, pollution and the environment, the performing arts, welfare, and the energy crisis. Prerequisites: for 201S, Economics 149 and statistics; for 202S, Economics 201S. One course each. *Weintraub*

206S. Regulation and Industrial Economics. (SS) Analysis of industrial competition and performance in industries such as automobiles, telephones, cable TV, airlines, pharmaceuticals, tobacco, and health care services. Analysis of the efficiency of regulation and other public policy programs. Prerequisites: Economics 149 and statistics. One course. *Grabowski*

209S. Economics of Population. (SS) Relationship of population growth to economic development and to natural resource and environmental pressures. Causes and impacts of population change, including economic models of fertility, mortality, marriage, and migration. Prerequisites: Economics 149 and 154. One course. *Kelley*

212S. Economic Science and Economic Policy. (SS) An historical and contemporary examination of the impact of economics on public policy. Topics vary each semester and have included energy and anti-inflationary policy, productivity growth, the Third World, and the Council of Economic Advisers. Different sources of economic ideas in the policy process. Prerequisites: Economics 149, 154, and consent of instructor. One course. *Goodwin*

COURSES CURRENTLY UNSCHEDULED

65. Japanese Business Management. (SS)

69. Australia and the Asia-Pacific Economies. (SS)

108. Economics of War. (SS)

144. Education, Development, and Growth. (SS)

169, 170. Microeconomic Analysis I and II. (SS)

198S. Economics of Regulation. (SS)

203S. Mathematical Economics. (SS)

207S. Models of Conflict and Cooperation. (SS)

211S. Current Problems in Aggregate Supply. (SS)

224S. Economics of the Law. (SS)

231S. Economic Development in Latin America. (SS)

235. The Economics of Crime. (SS)

244. Education, Development, and Growth. (SS)

273. Economics of Organization and Management. (SS)

280S. Fundamentals of Political Economy. (SS)

THE ECONOMICS MAJORS AND MINOR

The department of economics publishes a handbook to guide economics majors and minors. A copy may be obtained from the assistant to the director of undergraduate studies. For both the majors and the minor, substitution of similar courses in other departments at Duke for courses in the Economics Department is not permitted.

THE MAJORS

For the A.B. Degree

Prerequisites. Introductory macroeconomics: Economics 1(A or D) or 51D. Introductory microeconomics: Economics 2(A, D, or S) or 52D. Mathematics 26L or 31 or 31L or advanced placement credit for Mathematics 31. A course in statistical methods at the 100 level or above (the best statistics course for most economics majors is Statistics 110B). Statistics courses currently acceptable include Mathematics 136, Psychology 117, Public Policy Studies 112, Sociology 133, and any course at or above the 100 level in the Institute of Statistics and Decision Sciences.

Requirements. Economics 149 or 249 and Economics 154, 154L, 254, or 254L and any five additional economics courses at the 100 level or above. Students who have taken Public Policy Studies 110 instead of Economics 149 must take an additional economics course at the 100 level or above.

For the B.S. Degree

The Bachelor of Science degree in economics signifies achievement of proficiency in quantitative skills and experience in applying these to economics. It is recommended for students who plan to do graduate study in economics and graduate business programs, and for students interested in employment in business or government agencies where these skills would be valuable. Students who contemplate graduate study in economics are urged to develop skills in multivariate calculus (Mathematics 103), linear algebra (Mathematics 104), differential equations (Mathematics 111) and advanced calculus (Mathematics 139). Students interested in graduate work in business administration may wish to focus less on mathematics and more on computer science, statistics and quantitative economics.

Prerequisites. Introductory macroeconomics: Economics 1 (A or D) or 51D. Introductory microeconomics: Economics 2 (A, D, or S) or 52D. A course in statistical methods at the 100 level or above (the best statistics course for most economic majors is Statistics 110B). Statistics courses currently acceptable include Mathematics 136, Psychology 117, Public Policy Studies 112, Sociology 133, and any course at or above 100 level in the Institute of Statistics and Decision Sciences). Mathematics 103.

Requirements. Economics 139 or 239; Economics 149 or 249; and Economics 154, 154L, 254, 254L. Any four additional economics courses at the 100 level or above. Any two additional courses drawn from the following: computer science at any level, 100 level or above courses in mathematics, 100 level or above courses in statistics, the following quantitatively oriented economics courses: 158 or 258, 171S or 271S, 181 or 281, 203S, 207, 220S, 225S, 257S. Students who take Public Policy Sciences 110 instead of Economics 149 must take an additional economics course at the 100 level or above.

Honors/Distinction

For graduation with departmental distinction at least one honors seminar and an honors paper are required. Prerequisites for admission to an honors seminar, upon invitation to take such a seminar extended by the director of the honors program (Professor Goodwin), are two of the following courses: Economics 149, 154, and an approved statistics

course. The proposed program of research must be approved in advance by the faculty sponsor and the director of the honors program. See the section on honors in this bulletin.

THE MINOR

Requirements. Five courses in economics including introductory macroeconomics: Economics 1(A or D) or 51D; introductory microeconomics: Economics 2(A, D, or S) or 52D; and three courses at the 100 level or above including at least one intermediate level economic theory course: Economics 149, 249, 154, 154L, 254, or 254L. Students with Advanced Placement credit for either or both Economics 1A and 2A must substitute the same number of additional economics courses. Such courses may be drawn from all courses taught in the Economics Department, including freshman seminars and economics courses in the Duke study abroad programs. Students who have taken Public Policy Studies 110 instead of Economics 149 must take an additional economics course at the 100 level or above.

Education (EDU)

Assistant Professor of the Practice Malone, *Acting Associate Director and Director of Undergraduate Studies*; Associate Professors Di Bona and Sawyer; Professors of the Practice Ballantyne and Beckum; Assistant Professor of the Practice Bookman; Adjunct Professors Friedrich and Trask; Adjunct Associate Professors Martin and Wilson; Adjunct Assistant Professor Bryant; Adjunct Assistant Professors of the Practice Lattimore and Teasley; Lecturer Riggsbee; Adjunct Lecturer Wasiolek

Students who desire an understanding of the field of education as part of their liberal arts program should elect courses in accordance with their special interests. Selected courses in education may satisfy requirements in the social sciences area of knowledge. Students interested in licensure to teach secondary school should consult the director of teacher preparation. Students interested in licensure to teach elementary school should consult the elementary program coordinator.

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

100. Social and Philosophical Foundations of Education. (SS) Basic features and assumptions, viewpoints, and issues of education in contemporary America. One course. *Di Bona or staff*

108S. Teaching Practices in Elementary Language Arts and Content Areas. (SS) Research, theories, and practices of language arts, social studies, science, and mathematics instruction in the elementary school. Introduction to appropriate strategies and methodologies that reflect proven educational practices and research. A planned, sequential field-based experience in a model public school is provided. One course. *Riggsbee*

109S. Elementary Curriculum. Seminar in curriculum development. Principles, practices, and problems of instruction. For student teachers only. One course. *Bryant or staff*

117S. Psychology of Personal and Social Adjustment. (SS) Principles of mental health affecting individual and social adjustments. One course. *Malone*

118. Educational Psychology. (SS) Emotional and cognitive learning in children, youth, and adults. One course. *Malone or staff*

120. Elementary Education: Internship. Supervised internship in a teaching center in an elementary school, involving full-time teaching. For student teachers only. Two courses. *Riggsbee*

121. Infancy, Early Childhood, and Educational Programs. (SS) Developmental theories and their practical application in education. Emphasis on parenting and teaching. One course. *Riggsbee*

139. Marxism and Society. (SS) See C-L: Cultural Anthropology 139; also C-L: Comparative Area Studies, History 186, Literature 181, and Sociology 139. One course. *Staff*

140. The Psychology of Work. (SS) Factors affecting career choice and change. One course. *Ballantyne*

143. Education, Culture, and Society. (SS) See C-L: Cultural Anthropology 143. One course. *Luttrell*

149S. Exceptional Children. (SS) Etiology and assessment of major types of exceptionalities, including intellectual abilities, physical or emotional handicaps, and sensorially impaired. Family relationships and treatment programs. One course. *Staff*

155S. Tests and Measurements. (SS) Measuring abilities, achievement, and personality. Analysis, criticism, and construction of tests for admission, classroom, and society. One course. *Staff*

160. Early Childhood Internship. Internship in early childhood education centers, involving supervised experience. For Early Childhood Studies Certificate students only. One course. *Chafe or staff*

170, A-O. Selected Topics. One course. *Staff*

180S, 181S. Poverty and Public Education. (SS) Prerequisite: for Public Policy Studies 171S/Education 181S: Public Policy Studies 170S/Education 180S. See C-L: Public Policy Studies 170S, 171S. One course each. *Beckum*

189S. The Teaching of Composition, Grammar, and Literature in Secondary School. Includes field-based experiences with local schools. See C-L: English 118S; also C-L: Linguistics. One course. *Teasley*

191, 192. Independent Study. Directed reading and research for juniors. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

193, 194. Independent Study. Directed reading and research for seniors. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

For Seniors and Graduates

205, 206. Selected Topics. One course each. *Staff*

209. Global Education. (SS) A comparative survey of major educational changes and reforms in selected countries designed to illustrate general similarities and differences in the policies of developing and industrialized societies. Emphasis on American educational issues in the context of the emerging global economy. One course. *Di Bona*

211. Education and the Mass Media. (SS) Impact of mass media on behavior, particularly of children. One course. *Di Bona*

215S. Seminar in Secondary School Teaching. Principles, practices, and problems in secondary school instruction. One course. *Staff*

216. Secondary Education: Internship. Supervised internship in a teaching center in a senior high school involving some full-time teaching. For student teachers only. Two courses. *Bookman, Teasley, Wilson, or staff*

225. Teaching of History and the Social Studies. Evaluation of the objectives, content, materials, and methods in the teaching of history and the social studies. Includes field-based experiences with local schools. One course. *Wilson*

232. Learning and Living in Families. Role and function of the family as related to the development and behavior of its members, to gender identification, to parenting, and to interactions among family members. One course. *Ballantyne*

236S. Teaching Developmental and Remedial Reading in the Secondary School. Principles and methods for the development of effective reading and learning strategies in the high school classroom. Includes field-based experiences with local schools. One course. *Malone*

242S. Group Interactions. Examination of theoretical issues and processes involved in the dynamics of, and learning in, small groups of children, adolescents, parents, other adults, with attention to problem-oriented groups. One course. *Ballantyne*

246. Teaching of Mathematics. Aims, curriculum, and classroom procedure for teaching secondary school mathematics. Includes field-based experiences with local schools. One course. *Bookman*

276. Teaching of High School Science. Discussion, lectures, and collateral reading related to such topics as aims, tests, curriculum, classroom and laboratory procedures, field trips, and course and lesson planning for secondary school science. Includes field-based experiences with local schools. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

103S. American Educational Theory. (SS)

168S. Contemporary Education Criticism. (SS)

171T, 172T. Junior-Senior Tutorials

173, 174. Clinical Reading Practicum

210S. Higher Education in Latin America. (SS)

212S. Pedagogy and Political Economy: A World View. (SS)

227. Contemporary Theories of Counseling and Psychotherapy. (SS)

248. Practicum in Counseling

UNIVERSITY PROGRAM FOR PREPARATION FOR TEACHING*

Duke University offers programs to prepare students to become licensed teachers in elementary and secondary schools. As students complete requirements of Trinity College and of a selected major they may also fulfill requirements of an approved Duke teacher preparation program and become licensed to teach. Licensure by the Duke approved program is authorized through the State Board of Education in North Carolina and is reciprocal with most states. A license to teach along with an undergraduate degree is required by most public school systems and is recommended by many independent schools.

Brief descriptions of two undergraduate programs based on Bachelor of Arts or Bachelor of Science degrees (secondary school teaching and elementary teaching) are followed by a description of a program for secondary teaching based on a Master of Arts in Teaching degree. The goals of and criteria for admission to any of these programs are available from the respective offices.

Secondary School Teaching (A.B. or B.S. degree)

Students who are majors in the departments of English or mathematics may become eligible to be licensed to teach in their fields. Majors in biological anthropology and anatomy, biology, chemistry, environmental studies, geology, or physics may become eligible to be licensed to teach high school science. Majors in cultural anthropology, economics,

*Duke University is accredited by the North Carolina Department of Public Instruction and the National Council for Accreditation of Teacher Education (NCATE), and has reciprocal approval for initial licensure with most of the fifty states.

history, political science, psychology, public policy, religion, or sociology may become eligible to be licensed to teach social studies. Prospective teachers are advised to consult with their major academic advisors and the director of teacher preparation concerning their interest in teaching and in being accepted into the preparation program.

Interested undergraduate students may apply to the secondary school teaching program in the spring of their sophomore year or the fall of their junior year. Students are accepted by competitive criteria into a program which includes education courses with field experiences in schools, and an intensive senior spring semester teaching internship. During the internship students teach high school classes in their respective disciplines under the supervision of an experienced teacher and a university professor.

Upon completion of the senior year spring internship semester, and upon completion of the four-year Trinity College undergraduate degree, students may apply for licensure.

Elementary Teaching (A.B. or B.S. degree)

Undergraduate students who plan to teach young children (usually kindergarten through grade six) may become eligible for licensure to teach while at Duke in addition to completing any academic major offered by Trinity College. The Elementary Program includes academic course work and an intensive senior fall semester internship.

Interested undergraduate students should apply to the elementary program in the fall of the junior year. Students are selected by competitive criteria for participation in the program. An intensive senior fall semester links together a teaching internship in a local public school, seminars, and independent directed research (four course credits). Students selected for the elementary teaching program are placed as interns with teachers in an elementary school and are also supervised by a Duke professor. Duke student interns begin their teaching internship during preservice days before Duke classes begin.

Upon completion of the senior year fall semester internship and the four-year Trinity College undergraduate degree, students may apply for elementary teaching licensure.

Master of Arts in Teaching (MAT) in Secondary Schools

The Master of Arts in Teaching Program is designed for students who wish to teach their discipline in secondary schools by completing a graduate degree. Entry into the MAT Program is targeted for the second semester of the student's senior year. The normal sequence for MAT course work may begin in the spring semester of the senior year. Courses may not be double-counted toward both the bachelor's and MAT degrees. Additional information is available from the Office of the Dean of the Graduate School. This program is approved for teacher certification by the State Board of Education in North Carolina and is reciprocal with most states.

EARLY CHILDHOOD EDUCATION STUDIES CERTIFICATE PROGRAM

The goal of this program, which offers an interdisciplinary certificate in Early Childhood Education Studies, is to serve students who, in addition to their majors, may develop a concentration in early childhood development by selecting studies in psychology, sociology, cultural anthropology, and education in a supervised internship experience with child care centers, preschools, and families. The certificate curriculum requires six courses: two specifically designated as required and four elective. A required core course provides a comprehensive view of early childhood education, its history, programs, and current issues in the field. Other courses provide an additional academic base in understanding the development of the child and conditions of childhood. The internship provides direct experience under supervision in an approved child care center combined with weekly group discussions with a Duke internship supervisor. A paper developed on a topic relevant to the internship experience is required of internship participants. The certificate in Early Childhood Education Studies may help qualify a student to provide leadership in child

care centers, to raise standards in communities for improved early childhood programs, or identify an area for postbaccalaureate study.

The capstone course, Education 160 (Internship), is available only to students seeking the program certificate. Other components of the program are open to undergraduates. For additional information contact the Program in Education.

Introductory course

Education 121. *Infancy, Early Childhood, and Educational Programs. Riggsbee*

Four courses, at least two in each area:

Development of the Child:

Psychology 97. *Developmental Psychology: Introduction and Survey. Goldstein, Hill, Mazuka, Needham, Putallaz, or staff*

Psychology 121. *Early Cognitive Development. Needham*

Psychology 124. *Human Development. N. Anderson, Gustafson, and staff*

Psychology 131. *Early Social Development. Putallaz*

Psychology 159S. *Biological Psychology of Human Development. Thompson*

Psychology 183B,S. *Child Observation. Putallaz*

or

Psychology 136. *Developmental Psychobiology. Eckerman*

Psychology 205S. *Children's Peer Relations. Putallaz*

or

Psychology 206S. *Pediatric Psychology. Thompson*

Psychology 214S. *Development of Social Interaction. Eckerman*

Education 118. *Educational Psychology. Malone or staff*

Education 149S. *Exceptional Children. Staff*

Conditions of Childhood: (See "Development of the Child")

Cultural Anthropology 112. *Current Topics in Linguistics. Staff*

Cultural Anthropology 143. *Education, Culture, and Society. Luttrell*

Cultural Anthropology 280S. *Selected Topics: Advertising and Childhood. O'Barr*

Education 232. *Learning and Living in Families. Ballantyne*

Sociology 111. *Social Inequality: An International Perspective. DiPrete or O'Rand*

Sociology 117. *Childhood in Social Perspective. Simpson*

Sociology 118. *Sex, Gender, and Society. O'Rand*

Sociology 123. *Social Aspects of Mental Illness. George or Jackson*

Sociology 150. *The Changing American Family. Simpson*

Sociology 169. *Psychosocial Aspects of Human Development. Staff*

Sociology 215. *Basic Demographic Methods and Materials. Parnell*

Supervised Internship:

Education 160. *Early Childhood Internship. Chafe or staff*

English (ENG)

Professor Torgovnick, *Chair*; Associate Professor Tetel, *Associate Chair*; Professor Butters, *Director of Undergraduate Studies*; Professor of the Practice Gopen, *Supervisor of Freshman Instruction and Director of University Writing Program*; Professors Aers, Applewhite, Clum, C. Davidson, DeNeef, Fish, Gleckner, Goldberg, Holloway, Jackson, Lentricchia, Porter, Price, Randall, Ryals, Sedgwick, B. H. Smith, Strandberg, Tompkins, and K. Williams; Associate Professors Beckwith, Ferraro, Gaines, Gerber, Jones, Mellow, Moon, Moses, Pope, and Willis; Assistant Professors Clarke, Pfau, Shannon, and Thorn; Associate Professors of the Practice Cox and Malouf; Assistant Professor of the Practice Hillard; Adjunct Professor A. Davidson; Adjunct Associate Professor Ruderman; Adjunct Assistant Professors Kennedy, Sasson, and Wittig; Visiting Associate Professor Rosenfeld; Lecturer Chandler

A major or minor is available in this department.

WRITING AND LANGUAGE

27S. Studies in Nonliterary Topics. May be taken twice. One course. *Staff*

29. Composition and Language. (AL) Credit for Advanced Placement on the basis of the College Board examination in composition and language. One course.

48A, S. Focus Program Seminar on Writing or Language. Topics vary each semester offered. One course. *Staff*

49A, S. First-Year Seminar on Writing or Language. Topics vary each semester offered. One course. *Staff*

63S. Introduction to Creative Writing. (AL) One course. *Staff*

100A, S. Writing: Fiction. (AL) Instruction in the writing and study of fiction. Recommended for students before they take English 103S, 104S, 110S, 202S, or 203S. Consent of instructor required. One course. *Staff*

100B, S. Writing: Drama. (AL) Instruction in the writing and study of drama. Recommended for students before they take English 102S or 107S. Consent of instructor required. One course. *Staff*

100C, S. Writing: Poetry. (AL) Instruction in the writing and study of poetry. Recommended for students before they take English 105S or 106S. Consent of instructor required. One course. *Staff*

102S. Screenwriting. (AL) Consent of instructor required. Not open to students who have taken Drama 113S. See C-L: Drama 123S; also C-L: Film and Video. One course. *Wilson*

103S, 104S. Writing: Short Stories. (AL) Class discussion of students' manuscripts, individual conferences with the instructor. Open to sophomores, juniors, and seniors; recommended for, but not limited to, students who have taken English 100A. Consent of instructor required. One course each. *Applewhite, Cox, Malouf, Pope, Porter, or Price*

105S, 106S. The Writing of Poetry. (AL) Meter, image, tone, and dramatic organization in traditional and modern poems as a basis for original composition. Open to sophomores, juniors, and seniors; recommended for, but not limited to, students who have taken English 100C. Consent of instructor required. One course each. *Applewhite, Clarke, or Pope*

107S. Dramatic Writing. (AL) Open to sophomores, juniors, and seniors; recommended for, but not limited to, students who have taken English 100B. Not open to students who have taken the former Drama 111S. Prerequisites: a practical theater course (for example, acting, directing, design, stagecraft) and consent of instructor. See C-L: Drama 121S; also C-L: Film and Video. One course. *Wilson*

108S. Advanced Dramatic Writing. (AL) Not open to students who have taken the former Drama 112S. Prerequisites: Drama 121S and consent of instructor. See C-L: Drama 122S; also C-L: Film and Video. One course. *Wilson*

109S. Special Topics in Writing. (AL) Consent of instructor required. One course. *Staff*

110S. Writing: Longer Prose Narrative. (AL) The writing of a novel, novella, or group of short stories. Primarily for juniors and seniors. Consent of instructor required. One course. *Cox, Porter, or Price*

111. Introduction to Linguistics. (SS) See C-L: Linguistics 101; also C-L: Comparative Area Studies and Cultural Anthropology 107. One course. *Butters or Tetel*

112. English Historical Linguistics. (SS) Introduction to methods and principles of historical linguistics, as exemplified by the history of the English language from Proto-Indo-European to the present. Not open to students who have taken English 208. C-L: Linguistics. One course. *Butters or Tetel*

114. Languages of the World. (SS) See C-L: Linguistics 102; also C-L: Comparative Area Studies and Cultural Anthropology 114. One course. *Andrews or Tetel*

115. Gender and Language. (SS) See C-L: Russian 174; also C-L: Cultural Anthropology 174. One course. *Andrews*

116A. Scientific Writing. Prerequisite: University Writing Course 4, 5, 6, 7, or 12. See C-L: University Writing Course 112. One course. *Staff*

117A, S. Advanced Composition I. See C-L: University Writing Course 117S. One course. *Staff*

117B, S. Advanced Composition II. Prerequisite: successful completion of English 117A. See C-L: University Writing Course 118S. One course. *Staff*

118S. The Teaching of Composition, Grammar, and Literature in Secondary School. Visits to secondary school English classes, discussion with successful teachers, practice in making presentations, and evaluation of written work and other performance. C-L: Education 189S and Linguistics. One course. *Teasley*

119. Current Topics in Linguistics. (SS) See C-L: Cultural Anthropology 112; also C-L: Linguistics. One course. *Staff*

For Juniors, Seniors, and Graduates

202S. Narrative Writing. (AL) The writing of short stories, memoirs, tales, and other narrations. Readings from ancient and modern narrative. Close discussion of frequent submissions by class members. Consent of instructor required. One course. *Porter or Price*

203S. Advanced Narrative Writing. (AL) The writing of extended narrative prose—long stories, novellas, substantive memoirs. Students should be proficient in the writing of short narratives. Consent of instructor required. One course. *Porter or Price*

205. Semiotics and Linguistics. (SS) See C-L: Russian 205; also C-L: Linguistics. One course. *Andrews*

206. Semiotics of Culture. (AL, CZ) See C-L: Russian 202; also C-L: Cultural Anthropology 202. One course. *Andrews*

208. History of the English Language. (SS) Introductory survey of the changes in sounds, forms, and vocabulary of the English language from its beginning to the present, with emphasis on the evolution of the language as a medium of literary expression. Not open to students who have taken English 112. C-L: Linguistics and Medieval and Renaissance Studies. One course. *Butters or Tetel*

290. Methods of Composition Pedagogy. (SS) A philosophical and practical exploration of developments in the field of composition studies. Cognition, concept formation, psycholinguistics, interpretation, and the making of meaning. Works by Burke, Richards, Kitzhaber, Berlin, Berthoff, Bizzell, Elbow, Corbett, Macrorie, Williams, Coles, and others. One course. *Gopen or Hillard*

INTRODUCTION TO LITERATURE

20. Literature and Composition. (AL) Credit for Advanced Placement on the basis of the College Board examination in literature and composition. One course.

21S. Studies in the Novel. (AL) One course. *Staff*

22S. Studies in Drama. (AL) One course. *Staff*

23S. Studies in the Short Story. (AL) One course. *Staff*

24S. Studies in Poetry. (AL) One course. *Staff*

25S. Studies in the Epic. (AL) One course. *Staff*

26S. Studies in Special Topics. (AL) May be taken twice. One course. *Staff*

48B, S. Focus Program Seminar on Literature. (AL) Topics vary each semester offered. One course. *Staff*

49B, S. First-Year Seminar on Literature. (AL) Topics vary each semester offered. One course. *Staff*

51, 52. Representative American Writers. (AL) Selections and complete works. 51: Poe, Emerson or Thoreau, Hawthorne, Melville, Whitman, Dickinson, and Twain; not open to students who have taken English 152 or 153. 52: James, Frost or Robinson, Crane or Dreiser, O'Neill, Faulkner, Hemingway, and others. Not open to students who have taken English 153 or 154. One course each. *Staff*

90. Reading Critically: Poetry, Fiction, Drama. (AL) An introduction to the skills of critical reading and the vocabulary of critical analysis by close examination of poetry, fiction, and drama from a range of historical periods. A handbook or comparable guide to critical terms will be assigned. One course. *Staff*

90S. Reading Critically: Poetry, Fiction, Drama. (AL) A seminar version of English 90. One course. *Staff*

91. Reading Critically: Chaucer, Shakespeare, Milton, Pope. (AL) An introduction to the skills of critical reading and the vocabulary of critical analysis by close examination of the works of Chaucer, Shakespeare (or occasionally Spenser), Milton, and Pope. Focus on the acquisition of critical skills through analyzing the works of authors closely linked with the making of the dominant traditions of English poetry. A handbook or comparable guide to critical terms will be assigned. One course. *Staff*

92. British Literature 1750-1950. (AL) Studies in the literature of Great Britain from the eighteenth century through the modern period. One course. *Staff*

94. The Theater. (AL) Not open to students who have taken Drama 51. See C-L: Drama 91. One course. *Clum or Riddell*

BRITISH LITERATURE

121. Introduction to Medieval Literature. (AL) Late medieval literature, religion, and culture between 1350 and the English reformation. The range includes poetry, drama, romance, and different forms of devotional work. C-L: Medieval and Renaissance Studies. One course. *Aers or Beckwith*

123. English Literature: 1600 to 1660. (AL) Emphasis in poetry on Jonson and the cavaliers, Donne and the metaphysicals; in drama on Jonson, Tourneur, Webster, and Ford; in prose on character writers, Bacon, Burton, Donne, and Browne. C-L: Medieval and Renaissance Studies. One course. *DeNeef, Fish, Goldberg, or Randall*

125. English Literature of the Romantic Period. (AL) Wordsworth, Coleridge, Byron, Shelley, Keats. One course. *Applewhite, Gleckner, Jackson, or Pfau*

126. English Literature: 1832 to 1900. (AL) Major writers and genres, with special emphasis on the Brontës, Dickens, Hardy, Tennyson, Carlyle, Browning, Arnold, and Ruskin. One course. *Ryals or Sedgwick*

127. British Literature: 1900 to 1945. (AL) Principal writers of fiction, drama, and poetry such as Yeats, Conrad, Shaw, Joyce, Lawrence, Woolf, Eliot, Auden, and others. One course. *Moses, Pope, or Torgovnick*

128. Special Topics in British Literature since 1945. (AL) One course. *Staff*

129A, S. The Comedies of Shakespeare. (AL) C-L: Drama 108S. One course. *Randall*

129B, S. The Tragedies of Shakespeare. (AL) C-L: Drama 109S. One course. *Randall*

131. Studies in a Single British Author. (AL) One course. *Staff*

132B. Atmosphere and Mystery in Twentieth-Century English Fiction. (AL) (Summer program in England.) Not open to students who have taken English 138. See C-L: Religion 187. One course. *Kort*

132C, S. Topics in Renaissance British Literature. (AL) (Taught in the Oxford Summer Program.) Two courses. *Staff*

132E, S. Topics in Nineteenth-Century British Literature. (AL) (Taught in the Oxford Summer Program.) Two courses. *Staff*

132G, S. Topics in Twentieth-Century British Literature. (AL) (Taught in the Oxford Summer Program.) Two courses. *Staff*

133. British Drama: Wilde to the Present. (AL) See C-L: Drama 105. One course. *Blackadder or Clum*

135. British Poetry of the Twentieth Century. (AL) Changes in poetry and its criticism from the Edwardians. Yeats, Housman, Lawrence, Owen, the Sitwells, Graves, Auden, MacNeice, Dylan Thomas, Hughes, and Larkin. One course. *Moses, Pope, or Torgovnick*

136. Eighteenth-Century British Novel. (AL) Defoe, Richardson, Fielding, Smollett, and Sterne; the Gothic novel. One course. *Jackson or Thorn*

137. Nineteenth-Century British Novel. (AL) Scott, Austen, Dickens, Thackeray, Trollope, the Brontës, George Eliot, Meredith, Butler, Hardy, and others. Not open to students who have taken English 132A. One course. *A. Davidson, Moses, Ryals, Sedgwick, or Torgovnick*

138. Twentieth-Century British Novel. (AL) Conrad, Lawrence, Forster, Joyce, Woolf, Huxley, Cary, Amis, and Golding. Not open to students who have taken English 132B. One course. *A. Davidson, Moses, Pope, or Torgovnick*

139S. Special Topics in British Literature. (AL)

A. Can be counted as a pre-1800 British literature course for the English major requirements.

B. Can be counted as a pre-1900 British literature course for the English major requirements but not as a pre-1800 British literature course.

C. Does not count toward the pre-1800 or pre-1900 British literature English major requirements.

One course. *Staff*

Major Authors

140, 141. Chaucer. (AL) 140: first two-thirds of his career, especially *Troilus and Criseyde*. 141: *The Canterbury Tales*. C-L: Medieval and Renaissance Studies. One course each. *Aers, Beckwith, DeNeef, or Gopen*

143, 144. Shakespeare. (AL) 143: twelve plays before 1600. 144: usually ten plays after 1600. Not open to students who have taken Drama 115, 116. C-L: Drama 182, 183 and Medieval and Renaissance Studies. One course each. *DeNeef, Goldberg, Gopen, Jones, Porter, or Randall*

145. Milton. (AL) Poetry and its literary and social background. C-L: Medieval and Renaissance Studies. One course. *Fish, Goldberg, or Price*

For Juniors, Seniors, and Graduates

212. Middle English Literature: 1100 to 1500. (AL) Selected topics. C-L: Medieval and Renaissance Studies. One course. *Aers or Beckwith*

220. Shakespeare: Selected Topics. (AL) One course. *Goldberg or Porter*

221. Renaissance Prose and Poetry: 1500 to 1660. (AL) Selected topics. C-L: Medieval and Renaissance Studies. One course. *DeNeef, Fish, Goldberg, Randall, or Shannon*

225. Renaissance Drama: 1500 to 1642. (AL) Selected topics. C-L: Drama 225 and Medieval and Renaissance Studies. One course. *Goldberg, Porter, and Randall*

235. Restoration and Eighteenth-Century Literature: 1660 to 1800. (AL) Selected topics. One course. *Jackson or Thorn*

241. Romantic Literature: 1790 to 1830. (AL) Selected topics. One course. *Applewhite, Gleckner, Jackson, or Pfau*

245. Victorian Literature: 1830 to 1900. (AL) Selected topics. One course. *Ryals or Sedgwick*

251. British Literature since 1900. (AL) Selected topics. One course. *Lentricchia, Moses, or Torgovnick*

AMERICAN LITERATURE

152. American Literature: 1820 to 1860. (AL) Prose and poetry of American romanticism: Emerson, Thoreau, Hawthorne, Poe, Melville, and Whitman. Not open to students who have taken English 51. One course. *C. Davidson, Jones, Moon, Tompkins, or K. Williams*

153. American Literature: 1860 to 1915. (AL) Dickinson, Twain, James, the social and philosophical essayists, Crane, Dreiser, Robinson, and Frost. Not open to students who have taken English 52. One course. *C. Davidson, Jones, Moon, or K. Williams*

154. American Literature: 1915 to 1960. (AL) Eliot, Fitzgerald, Hemingway, Faulkner, and others. Not open to students who have taken English 52. One course. *Clum, Ferraro, Lentricchia, Moon, Moses, Pope, or Strandberg*

155. Contemporary American Writers. (AL) Novelists and poets prominent since 1960. One course. *Clum, C. Davidson, Ferraro, Moses, Strandberg, or Torgovnick*

159. Modern Southern Writers. (AL) Writers who came to maturity following World War I, and their successors: Faulkner, Wolfe, Porter, Tate, Warren, Welty, Taylor, Percy, O'Connor, Dickey, Hurston, Walker, and others. Works analyzed in the historical and cultural context of the region. One course. *Applewhite*

161. Studies in a Single American Author. (AL) One course. *Staff*

162. American Drama: O'Neill to the Present. (AL) See C-L: Drama 104. One course. *Clum*

163. Twentieth-Century American Poetry. (AL) The classicism of Pound, Eliot, and the Fugitives in relation to the neoromanticism of Stevens, Williams, Crane, and Roethke. Developments during World War II and after: Lowell, Jarrell, Berryman, Dickey, Levertov, and Wright. One course. *Applewhite, Moon, Moses, Pope, or Torgovnick*

164A, 164B. African-American Literature. (AL) 164A: oral and literary traditions from the American colonial period into the nineteenth century, including spiritual as lyric poetry and the slave narrative as autobiography. 164B: the late nineteenth century to contemporary writers. Not open to students who have taken the former English 167, 168. C-L: African and African-American Studies 173, 174. One course each. *Chandler, Clarke, or Holloway*

165. A-E. Studies in an Individual African-American Author. (AL)

A. James Baldwin

B. W. E. B. DuBois

C. Ralph Ellison

E. Toni Morrison C-L: African and African-American Studies 181.

One course. *Chandler, Clarke, Holloway, or Willis*

166. A-F. African-American Literary Genres. (AL)

A. Autobiography

B. Drama

C. Poetry

E. The Novel

F. The Essay

C-L: African and African-American Studies 182. One course. *Chandler, Clarke, Holloway, or Willis*

167. Special Topics in Contemporary Black Literatures. (AL) One course. *Chandler, Clarke, Holloway, or Willis*

168S. Seminar in African-American Literary Studies. (AL) Topics may change each semester. Prerequisite: English 164A or 164B. One course. *Chandler, Clarke, Holloway, or Willis*

169S. Special Topics in American Literature. (AL) One course. *Staff*

For Juniors, Seniors, and Graduates

263. American Literature to 1865. (AL) Selected topics. One course. *C. Davidson, Jones, Moon, or Tompkins*

267. American Literature: 1865 to 1915. (AL) Selected topics. One course. *C. Davidson, Moon, Tompkins, or K. Williams*

269. American Women Writers. (AL) Selected topics. C-L: Women's Studies. One course. *C. Davidson, Pope, or Tompkins*

275. American Literature since 1915. (AL) Selected topics. One course. *Ferraro, Lentricchia, Pope, Strandberg, or Torgoonick*

GENRE, CRITICISM, AND WORLD LITERATURE

170. Special Topics in Genre. (AL) One course. *Staff*

172. Literary Theory. (AL) Major works and theoretical issues in the history of literary criticism. One course. *Staff*

174A. Classical to Neoclassical. (AL) See C-L: Drama 102. One course. *Blackadder or Clum*

174B. Toward and Beyond Realism. (AL) See C-L: Drama 103. One course. *Blackadder or Clum*

175. Literary Approaches to the Bible. (AL) Selected books of both Testaments, emphasizing narrative strategies, literary contexts, and Biblical genres: primeval myth, patriarchal history, prophecy, and apocalyptic. One course. *Staff*

176A. Special Topics in Drama in England. (AL) Dramatic literature, theater history, or film. (Bristol, England, drama program.) Also taught as Drama 119. One course. *Clum and staff*

176B, S. Theater in London: Text. (AL) Drama in performance from the Greeks to the present based on performances offered by the Royal Shakespeare Company, Royal National Theatre, and other theaters in London. Twenty plays will be seen and studied. (London summer program.) Not open to students who have taken the former Drama 149S. C-L: Drama 117S. One course. *Blackadder or Clum*

176C, S. Theater in London: Performance. (AL) The stages of realization of a play or musical from the script to the production, focusing on productions in London. Aspects of theatrical performance through scene work, discussions, and workshops with British theater practitioners, observation of theater at work, and supervised projects. (London summer program.) Not open to students who have taken the former Drama 148S. C-L: Drama 138S. One course. *Blackadder or Clum*

177. Third World and Postcolonial Fiction. (AL) Comparative study of representative contemporary fiction from Africa, India, the Middle East, Australia, New Zealand, Latin America, and the Caribbean, each within its appropriate cultural, historical, and political context. All readings in English. One course. *Moses or Torgovnick*

178. Literature and the Other Arts. (AL) Selected topics in the study of the interrelation of literature and other art forms, such as music and painting. One course. *Staff*

179S. Special Topics in a Literary Genre. (AL) One course. *Staff*

184. Literature and Sexualities. (AL) American and British representations of sexual identities and same-sex desire, ranging from the proliferation of homo/heterosexual discourses in the late nineteenth century to literature about AIDS in contemporary mass media. Whitman, Wilde, Stein, Hall, Forster, Lorde, Moraga, Watney, and others. C-L: Study of Sexualities. One course. *Clum, Goldberg, or Moon*

186A, S. Canadian Literature in English. (AL) Eighteenth century to the present. Emphasis on the twentieth century and on novels by Hugh MacLennan, Margaret Laurence, Mordecai Richler, Margaret Atwood, Rudy Wiebe, and others. C-L: Canadian Studies and Comparative Area Studies. One course. *A. Davidson*

186B, S. Canadian Theater. (AL) A survey of Canadian drama. C-L: Canadian Studies. One course. *Staff*

For Juniors, Seniors, and Graduates

281. Studies in Genre. (AL) History, criticism, and theory of literary genres such as the novel, pastoral, epic, and drama. One course. *Staff*

285. Major Texts in the History of Literary Criticism. (AL) A survey of major critical writings from Aristotle to the present. One course. *Staff*

288. Special Topics. (AL) Subjects, areas, or themes that cut across historical eras, several national literatures, or genres. One course. *Staff*

289. The Theory of the Novel. (AL) Major issues in the history and theory of the novel. One course. *Moses or Torgovnick*

CULTURAL STUDIES

28S. Studies in Film and Video. (AL) May be taken twice. C-L: Film and Video. One course. *Staff*

101A. Introduction to Film. (AL) Basic film theory and history of motion picture technology. Introduction to experimental, documentary, and narrative forms of Third World, European, and United States cinemas. Economics and aesthetics. C-L: Drama 173, Film and Video, and Literature 110. One course. *Gaines*

101B. Introduction to Cultural Studies. (AL) Basic theoretical approaches to high and low culture—Bourdieu and Adorno, the Frankfurt School and the Birmingham Center for Contemporary Cultural Studies; Third World and feminist approaches; the avant-garde and subcultural resistance. Analysis of sport and leisure, film and photography, law and the arts, popular and classical music, painting and advertising imagery. C-L: Film and Video and Literature 100. One course. *Gaines, Radway, Surin, Tompkins, Torgovnick, or Willis*

101C, S. Documentary Film/Video Theory and Practice. (AL) Prerequisite: Drama 173, English 101A, Literature 110, or Literature 111S. See C-L: Film and Video 104S; also C-L: Cultural Anthropology 131S. One course. *Staff*

101D, D. Perspectives in Gay, Lesbian, and Bisexual Studies. (CZ) See C-L: Study of Sexualities 115D. One course. *Younger*

120. Advertising and Society: Global Perspective. (SS) See C-L: Cultural Anthropology 110; also C-L: Comparative Area Studies, Film and Video, Sociology 160, and Women's Studies. One course. *Luttrell, O'Barr, J. Smith, or Wilson*

122. Studies in Comparative World Cinema. (AL) See C-L: Literature 113; also C-L: Film and Video, German 113, and Russian 113. One course. *Staff*

124. Sexualities in Film and Video. (AL) See C-L: Literature 115; also C-L: Film and Video and Study of Sexualities. One course. *Clum, Gaines, or Moon*

156. History of Mass Culture in the United States. (AL) The formation of American popular culture in different historical periods. Cultural forms including music, movies, fashion, and leisure. C-L: Literature 140. One course. *Gaines, Radway, Tompkins, Torgovnick, or Willis*

157, 158. American Literature and Culture. (AL) Relationship of literature to the other arts, American intellectual history, religion, science, technology, and architecture. 157: to the Civil War. 158: from the Civil War to 1960. One course each. *K. Williams*

183S. Film and Video Theory and Practice. (AL) Prerequisite: Drama 173, English 101A, Literature 110, or Literature 114. See C-L: Film and Video 100S; also C-L: Drama 142S. One course. *Burns*

185. Studies in Film History. (AL) Close examination of a particular issue, period, national cinema, or technological development. C-L: Drama 174, Film and Video, and Literature 116. One course. *Clum, Gaines, or Jameson*

187. Melodrama and Soap Opera. (AL) History of melodrama from Victorian theatrical production to television soap opera. Close study of popular women's fiction, silent cinema, the thirties and forties woman's picture, and fifties technicolor melodrama. Not open to students who have taken Drama 137. C-L: Drama 176, Film and Video, and Women's Studies. One course. *Clum or Gaines*

189S. Special Topics in Film. (AL) A major genre, period, or director. Not open to students who have taken the former Drama 197S. Prerequisite: Drama 173 or English 101A. C-L: Drama 178S and Film and Video. One course. *Clum, Gaines, or Moses*

190. Television, Technology, and Culture. (AL) Television criticism and its relation to film theory. Mainstream television genres, the historical avant-garde, and video art. History of the technology and cross-cultural comparison of television programming. Prerequisite:

Drama 173, English 101A, or Literature 114. C-L: Film and Video and Literature 119. One course. *Gaines*

For Juniors, Seniors, and Graduates

284. Contemporary Film Theory. (AL) Post-1968 film theory—Brechtian aesthetics, cinema semiotics, psychoanalytic film theory, technology, feminist theory, and Third World cinema. One course. *Gaines*

INDEPENDENT STUDY

191, 192, 193, 194. Independent Study. Directed reading and research. Consent of both the instructor and the director of undergraduate studies required. Half or one course each. Variable credit. *Staff*

195T. Tutorial. Directed reading and research. Students should consult the director of undergraduate studies as early as possible in the preceding term. One course. *Staff*

DISTINCTION SEMINARS

197A, 198A, S. Distinction Program Sequence. Open to those whose thesis will be a critical paper or piece of other research (for example, in linguistics). Consent of instructor required. One course each. *Staff*

197B, 198B, S. Distinction Program Sequence. Open to those whose thesis will be in the field of creative writing. Consent of instructor required. One course each. *Staff*

COURSES CURRENTLY UNSCHEDULED

- 50S. American Literature Walkabout
- 113A. Introduction to Old English. (AL)
- 113B. Old English Literature. (AL)
- 130. Shakespeare and the Theater. (AL)
- 151. American Literature to 1820. (AL)
- 182. American Film Genres. (AL)
- 188. Narrative Film and the Novel. (AL)
- 207A. Introduction to Old English. (AL)
- 207B. Old English Literature. (AL)
- 209. Present-Day English. (SS)
- 213, 214. Chaucer. (AL)
- 222. Reading Milton. (AL)

THE MAJOR

Basic Requirement. One course from the following list of introductory courses: English 90, 90S, or 91. Except by written permission of the director of undergraduate studies, the course must be taken in the first term after the major has been declared (unless it has been taken earlier). It may be taken concurrently with advanced courses.

Major Requirements. Nine or more courses at the 100- or 200-level from the department's offerings which consist of courses (including independent studies, tutorials, and distinction seminars) in: writing and language; British literature; American literature; genre, criticism, and world literature; and cultural studies. These are to be organized into a coherent plan of study approved by the student's advisor. The courses must include: (a) one of the following major author courses Chaucer (140, 141, 213, 214), Shakespeare (143, 144, 220), or Milton (145, 222); (b) two additional courses in British literature before 1900 (including at least one before 1800); (c) one 100-level seminar (which may be satisfied in [b]).

Recommendations. Students planning to enter graduate study in an English department should take additional courses from the early as well as later and modern periods. If

eligible, they should also apply for the Distinction Program. Aspiring graduate students should consult both their advisor and the chair of the department's Committee on Pre-graduate School Advising.

THE MINOR

Requirements. Five courses, four of which must be at or above the 100-level and none of which may be in the English 20S series. One of these courses must be a seminar, and only one transfer credit and no Advanced Placement credits may count toward the minor.

Foreign Languages

The department recommends that students majoring in English complete at least two years of college-level study, or the equivalent, of a foreign language. Students contemplating graduate work in English should note that many master's programs require examination in one foreign language and that doctoral programs commonly require examination in two. Students interested in linguistics are strongly urged to study at least one non-Indo-European language.

Teacher Certification

Each year a number of Duke English majors earn certificates as secondary school teachers. While licensed by the state of North Carolina, these majors are essentially certified for other states as well. Also, such training is urged for those who consider teaching in independent schools, since most private or parochial schools would prefer candidates who have earned teaching certificates.

Such certification may be gained as part of the English major and is not as time-consuming as is sometimes believed. Candidates should have a solid background in both American and British literature; also helpful are courses in composition and cultural studies. Among the requirements are one course in linguistics (English 111, 112, 115, 119, 205, 208, or 209), an appropriate course in psychology, and several courses in education.

The last semester of the senior year is devoted to the student-teaching block, including two special, accelerated courses and ten weeks of full-time teaching and observation in the schools, working with a mentor-teacher and with Duke faculty. This experience leads to an English-teaching certificate to accompany the bachelor's degree.

Anyone considering secondary school English teaching should confer with the director of secondary school teacher preparation in the Program in Education as soon as possible.

Honors/Distinction

The graduation with distinction program is designed for the department's best and most serious students, whose coursework and achievements have prepared them for a sustained writing project. The program consists of two seminars—English 197S and 198S—taken in the fall and spring semesters of the senior year. These seminars may not be counted among the courses required for completion of the major.

The fall seminar provides a weekly forum for discussion of thesis topics, research and organization, and the ins and outs of good writing. By the end of the term, students are expected to have the thesis well underway; permission to proceed to English 198S will depend on the student's progress during the fall semester. In the spring, students will work independently, for the most part, to complete the thesis; there will be some seminar meetings, as well as regular conferences with the program director and individual faculty advisors.

The thesis must be submitted before the end of the second term of the senior year to qualify for distinction. The department's honors committee will evaluate the theses and award distinction. A student who has done satisfactory work in the seminars but whose thesis is denied distinction will receive graded credit only for English 197S and English 198S. Theses awarded distinction will be bound and deposited in Perkins Library.

Students interested in the distinction program must apply to the department's honors committee by February 15 of the junior year. Application materials are available from and should be returned to the undergraduate assistant in 304H Allen Building. Applicants must have completed—by the beginning of the senior year—at least five 100-level courses in English and must have a minimum 3.5 average in their English courses. In addition, they must submit a writing sample and two recommendations from members of the faculty.

Environment (Nicholas School)

The professional school courses listed below are described fully in the *Bulletin of Duke University: Nicholas School of the Environment*. They are open to undergraduates by consent of the instructor; they do not count for area of knowledge distribution requirements.

Students who are preparing for professional careers in natural resources and the environment should refer to the section on undergraduate-professional combination programs and the section Environmental Sciences and Policy Program in this bulletin.

200. Integrated Case Studies. Prerequisite: consent of the dean of the Nicholas School of the Environment. Credit to be arranged. *Staff*

201. Forest Resources Field Skills. Half course. *Davison and Richter*

204. Forest Inventory, Growth, and Yield. One course. *Davison*

205, 205L. Ecological Management of Forest Systems (Silviculture). One course. *Oren*

207, 207L. Forest Pest Management. One course. *Stambaugh*

208L. Estuarine Ecosystem Processes. (Given at Beaufort.) Prerequisite: ecology, systematics, or field biology course or consent of instructor. C-L: Marine Sciences. One course. *Kirby-Smith*

211L. Applied Ecology and Ecosystem Management. Prerequisites: introductory course in biology and ecology. One course. *Staff*

212. Environmental Toxicology. Prerequisites: organic chemistry and vertebrate physiology or consent of instructor. One course. *Di Giulio*

213. Forest Ecosystems. One course. *Richter*

215. Environmental Physiology. Half course. *Oren*

216. Applied Population Ecology. Prerequisites: introductory statistics, calculus, and computer programming, or consent of instructor. One course. *Maguire or staff*

217. Tropical Ecology. Prerequisite: a course in general ecology. C-L: Biology 215. One course. *Terborgh*

218L. Barrier Island Ecology. (Given at Beaufort.) Prerequisite: introductory biology; suggested: course in botany or general ecology. C-L: Biology 218 and Marine Sciences. One and one-half courses. *Staff*

219L. Marine Ecology. (Given at Beaufort.) Prerequisites: none; suggested introductory ecology, invertebrate zoology, or marine botany. C-L: Biology 203L and Marine Sciences. One and one-half courses (summer), one course (fall and spring). *Kirby-Smith or staff*

220. Vegetation Management in Urban Ecosystems. One course. *Stambaugh*

221. Soil Resources. One course. *Richter*

222L. Physical Processes in Coastal Environments. (Given at Beaufort.) Prerequisites: Mathematics 31 and 32. C-L: Geology 201 and Marine Sciences. One course. *Staff*

225L. Coastal Ecotoxicology and Pollution. (Given at Beaufort.) Prerequisites: introductory chemistry and biology. C-L: Marine Sciences. One course. *Kenney*

230L. Weather and Climate. One course. *Knoerr*

232. Microclimatology. C-L: Biology 232. One course. *Knoerr*

234L. Watershed Hydrology. One course. *Katul*

235. Air Quality Management. One course. *Vandenberg*

236. Water Quality Management. One course. *Reckhow*

239. Human Health and Ecological Risk Assessment. One course. *Vandenberg and Mihaich*

240. Fate of Organic Chemicals in the Aquatic Environment. Prerequisites: university-level general chemistry and organic chemistry within last four years. C-L: Civil and Environmental Engineering 240. One course. *Dubay and staff*

241. Atmospheric Chemistry and Air Pollution. Prerequisites: university-level general chemistry and organic chemistry within last four years. C-L: Civil Engineering 241. One course. *Staff*

242. Environmental Aquatic Chemistry. Prerequisite: university-level general chemistry within the last four years. C-L: Civil and Environmental Engineering 242. One course. *Staff*

243. Environmental Biochemistry. (Given at Beaufort.) Prerequisite: organic chemistry. C-L: Cell Biology 243 and Marine Sciences. One course. *Bonaventura*

244L. Cellular and Molecular Research Techniques. (Given at Beaufort.) Prerequisite: organic chemistry. C-L: Cell Biology 244L and Marine Sciences. One course. *C. Bonaventura and McClellan-Green*

245. Ecology of Microorganisms. One course. *Staff*

246. Survey of Occupational Health and Safety. Prerequisite: consent of instructor. One course. *Staff*
247. Survey of Environmental Health and Safety. Prerequisite: consent of instructor. One course. *Staff*
248. Solid Waste Engineering. Prerequisite: Civil Engineering 124L or consent of instructor. C-L: Civil Engineering 248. One course. *Vesilind*
249. Environmental Molecular Biology. Prerequisite: Introductory biology. One course. *Freedman*
251. Statistics and Data Analysis in Biological Science. C-L: Statistics 210B. One course. *Staff*
- 252L. Statistics and Data Analysis in Earth and Ocean Science. (Given at Beaufort.) Prerequisites: Mathematics 31 and 32, Statistics 110 or 112, or consent of instructor. C-L: Geology 222L and Marine Sciences. One course. *Staff*
255. Applied Regression Analysis. Prerequisite: Statistics 210B or equivalent. C-L: Statistics 242. One course. *Staff*
- 256S. Seminar in Ocean Sciences. (Given at Beaufort.) Prerequisite: consent of instructor. C-L: Marine Sciences. One-half course. *Staff*
261. Remote Sensing for Resource Management. One course. *Davidson*
263. Environmental Economics: Theory and Application. Prerequisite: Economics 149. C-L: Economics 263. One course. *Smith*
264. Applied Differential Equations in Environmental Sciences. Prerequisite: Mathematics 31 or equivalent or consent of instructor. One-half credit course. *Katul*
- 267S. Conservation Biology of Marine Mammals. (Given at Beaufort.) Consent of instructor required. Half course. *Read*
268. Advanced Topics in Nearshore Processes. (Given at Beaufort.) Prerequisite: Mathematics 111 or 114, or Environment 290, or consent of instructor. C-L: Geology 204 and Marine Sciences. One course. *Staff*
- 269S. Advanced Topics in Marine Ecology. (Given at Beaufort.) C-L: Marine Sciences. Half course. *Crowder*
270. Resource and Environmental Economics. Prerequisite: introductory course in microeconomics. C-L: Economics 270 and Public Policy Studies 272. One course. *Kramer*
271. Economic Analysis of Resource and Environmental Policies. Prerequisite: Environment 270 or equivalent; Economics 149 is recommended. C-L: Economics 272. One course. *Staff*
272. Evaluation of Public Expenditures. C-L: Economics 261 and Public Policy Studies 261. One course. *Conrad*
273. Marine Fisheries Policy. (Given at Beaufort.) C-L: Marine Sciences. One course. *Orbach*
274. Resource and Environmental Policy. Prerequisite: Environment 270, Public Policy Studies 272, or consent of instructor. C-L: Public Policy Studies 274. One course. *Staff*
276. Marine Policy. (Given at Beaufort.) Consent of instructor required. C-L: Marine Sciences and Public Policy Studies 197. One course. *Orbach*
277. Conservation and Sustainable Development I: Concepts and Methods. One course. *Staff*
278. Conservation and Sustainable Development II: Integrated Problem Solving. One course. *Staff*
- 282S. Environmental Ethics. Consent of instructor required. C-L: Philosophy 289S. One course. *Cooper*
285. Land Use Principles and Policy. C-L: Public Policy Studies 285. One course. *Healy*
290. Physical Oceanography. Prerequisites: Mathematics 31 and 32 or consent of instructor. C-L: Geology 203 and Mechanical Engineering 290. One course. *Lozier*
291. Geological Oceanography. Not open to students who have taken Geology 206S. (Given at Beaufort.) C-L: Geology 205 and Marine Sciences. One course. *Staff*
- 297L. Biology of Marine Invertebrates. (Given at Beaufort.) Not open to undergraduates who have taken Biology 176L. Prerequisite: introductory biology (Biology 21L and 22L). C-L: Biology 274L and Marine Sciences. One and one-half courses. *Dimock (visiting summer faculty)*
298. Special Topics. One-half or one course. *Staff*

COURSES CURRENTLY UNSCHEDULED

210, 210L. Forest Pathology

Environmental Sciences and Policy Program

Assistant Professor of the Practice Miranda, *Director*

A major is available in this program.

The undergraduate major in environmental sciences and policy is offered within the Bachelor of Arts degree to students interested in the interdisciplinary study of environmental issues. The major permits students to combine studies in the natural sciences and engineering with courses in social sciences and humanities around general focus areas and themes. This major is specifically designed for students with career objectives such as

environmental law, policy, science, management, or planning that require in-depth understanding of environmental issues that cross traditional disciplinary boundaries.

The major is housed within and administered by the Nicholas School of the Environment. Elective courses for the major are taught by more than sixty Duke professors in twenty cooperating departments and schools. The prerequisites for this major stress a firm foundation in basic natural and social science areas. An introductory core course focuses on local, regional, and global case studies taught by interdisciplinary teams of faculty. Upper-level courses are selected in consultation with advisors to match a specific environmental theme or career objective. The upper-level curriculum includes a course in probability and statistics, an upper-level seminar, and an independent study, internship, or field experience. At least two courses in the upper-level curriculum must be selected from approved lists in each of the social sciences/humanities and sciences/engineering. The program is administered by its director and an advisory committee representing the various areas and cooperating departments.

Advising. Advisors are assigned based on students' general areas of interest. Students present a proposed plan of study to their advisors that emphasizes the connections among their courses. This proposal is normally completed by the end of the sophomore year. The program encourages close relationships between faculty and students with convergent interests.

Independent Study, Internship, or Field Experience. All students in the program complete either an independent study, internship, or a field experience related to their proposed course of study. The director's office, in collaboration with Duke's Career Development and Counseling Office, maintains a file of available internships. Field experiences may include a semester or summer session at the Duke University Marine Laboratory, one of several approved study abroad programs, or studies at over thirty field laboratories.

Grants and Awards. Grants and awards are administered through the office of the Environmental Sciences and Policy Program. These include support for independent studies, internships, and field studies.

ENVIRONMENTAL SCIENCES AND POLICY COURSES (ENV)

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

101. Introduction to Environmental Sciences and Policy. (SS) Application of basic principles of natural science, environmental economics and policy, engineering, and ethics to local, regional, and global environmental issues. Not open to first-year students. One course. *Kramer or Miranda*

105. Global Environmental Geography. (NS) Global spatial patterns of natural phenomena and the human modification of those patterns. Introduction to earth/sun relations, climatology, biogeography, and geomorphology. One course. *Staff*

121. Climate Change: A Global Perspective. (NS) Introduction to the scientific basis for prediction of global environmental change with emphasis on change in surface temperature, sea level, precipitation, and tropical cyclone activity. (Given at Bermuda.) C-L: Marine Sciences. One course. *Malmquist or Norton*

122S. Climate-Related Hazards and Humanity. (NS) The roles of science, politics, and business in quantifying and managing risks associated with climate-related hazards such as hurricanes. (Given at Bermuda.) C-L: Marine Sciences. Half course. *Malmquist or Norton*

125. Remote Sensing and Long-term Environmental Monitoring. (NS) Introduction to the theory and practice of environmental monitoring. Ocean biogeochemical cycles, tropical ecosystems, monitoring, and air and water pollution impact assessment and monitoring. (Given at Bermuda.) C-L: Marine Sciences. One course. *Nelson*

129. Environmental Science and Policy of the Tropics. (NS, SS) Investigates major environmental issues facing tropical nations using concepts from the natural and physical sciences, the social sciences, and resource management. Topics include: climatic and biogeographical patterns, trends in human population size and demography, historical and contemporary issues in resource use and conservation, and sociological and ethical concerns regarding the source and distribution of economic wealth. (Given in Costa Rica.) Prerequisite: introductory biology. One course. *Shelly*

130L. Tropical Marine Invertebrates. (NS) Systematics, structure, and function of tropical marine invertebrates. Includes laboratory. (Given at Bermuda.) Prerequisite: introductory biology. C-L: Biology 130L and Marine Sciences. One course. *Coates*

131L. Tropical Marine Ecology. (NS) Factors influencing the distribution, abundance, and diversity of marine tropical organisms. Emphasis on coral reef and mangrove ecosystems. Includes laboratory. (Given at Bermuda.) Prerequisite: introductory biology. C-L: Biology 131L and Marine Sciences. One course. *Lipschultz or Smith*

132S. Current Topics in Oceanography and Marine Biology. (NS) Topics such as the Iron Hypothesis, toxic algal blooms, and UV light considered through readings in the primary literature and student presentations. (Given at Bermuda.) Prerequisite: introductory biology. C-L: Marine Sciences. Half course. *Lipschultz or Nelson*

133S. Molecular Approaches to Questions of Physiology, Ecology, and Evolution in the Marine Environment. (NS) Prerequisite: introductory biology. C-L: Marine Sciences. Half course. *Trapido-Rosenthal*

134L. Marine Biogeochemistry. (NS) Biogeochemistry of carbon and nitrogen in the marine environment and associated laboratory techniques. Includes laboratory. (Given at Bermuda.) Prerequisites: introductory biology and introductory chemistry. C-L: Marine Sciences. One course. *Bates, Hansell, or Lipschultz*

149. United States Environmental Policy. (SS) See C-L: Public Policy Studies 149. One course. *Besse or Miranda*

181, 182. Special Topics in Environmental Sciences and Policy. Content to be determined each semester. Consent of instructor required. One course each. *Staff*

191, 192. Independent Study. Open to qualified juniors and seniors with consent of instructor and director of undergraduate studies. Variable credit. *Staff*

THE MAJOR

Corequisites. The following courses or their equivalents (for example, Advanced Placement credit) are required. Approval to substitute courses taken at other universities must be obtained from the director of undergraduate studies in the department offering the course. Some of these courses are prerequisite to some upper-level courses in this major.

Biology 25L. Principles of Biology

Biology 31 or 32. Diversity of Life, or 140. Plant Diversity, or 176. Marine Invertebrate Zoology

Chemistry 11L and 12L. Principles of Chemistry

Economics 2D or 52D. Competition, Monopoly, and Welfare

Geology 41. Introduction to Geology

Mathematics 31 and 32. Introductory Calculus I and II

Major Requirements.

1. *Introductory Core Course:* Environment 101.
2. *Environmental Policy.* One course from an approved list of environmental policy courses.

Approved courses include:

Public Policy Studies 107/Political Science 107. Comparative Environmental Policies
Environment 149/Public Policy Studies 149. United States Environmental Policy
Public Policy 147/Political Science 147. Environmental Politics and Policies in the
Developing World
Political Science 148/Public Policy Studies 143. Environmental Policies Beyond
Borders

3. *Probability and Statistics*. One course from an approved list dealing with statistical inference and probability theory. Approved courses include:
Political Science 138. Quantitative Political Analysis
Public Policy Studies 112. Statistics and Public Policy
Psychology 117. Statistical Methods
Statistics 110. Statistics and Data Analysis in the Social Sciences
Statistics 112. Introduction to Applied Statistics
Sociology 133. Statistical Methods.
Environment 251. Natural Resources Data Analysis
4. *Focused Study*. Six upper-level courses proposed by students in consultation with their advisors to fit a particular theme or career objective. At least two of these courses must be selected from approved lists in each of the social sciences/humanities and sciences/engineering. These lists are available from the director of undergraduate studies of the program. One course must be an upper-level seminar or small-group learning experience.
5. *Independent Study/Internship/Field Experience*. Students complete an approved independent study, internship, or field experience which may or may not include course credit toward upper-level requirements. A letter must be submitted to the director of undergraduate studies from the faculty member, advisor, or supervisor verifying completion of the requirement.

(Note: Courses in a major may count toward only two areas of knowledge for the general studies requirement of the curriculum.)

Honors. The program offers a graduation with distinction option. See the section on honors in this bulletin. The director of undergraduate studies can provide more details.

Evolutionary Biology

See Biology.

Film and Video (FV)

Associate Professor Gaines, *Director*

A certificate, but not a major, is available in this program.

The Program in Film and Video is an interdisciplinary course of study which introduces students to the critical analysis of communications technologies: film, photography, and television. Practical production experience is also available through course work and internships. Courses in this area are offered through seventeen different academic departments and programs and taught by thirty-three faculty members. The program also sponsors speakers, video art screenings, and exhibits in cooperation with the Center for Documentary Studies, the Institute of the Arts, the Center for International Studies, the University Art Museum, the Literature Program, Asian and African Languages and Literature, and the Mary Lou Williams Center for Black Culture. Visiting independent filmmakers are brought to campus under the auspices of the Film and Video Program in conjunction with Screen/Society and Freewater exhibitions.

To qualify for the certificate, students must take at least two core courses and any four related courses from the approved list published in this bulletin or from the listings posted

each semester for a total of six courses. English 101A (Introduction to Film) is a prerequisite for all Film and Video production courses.

CORE COURSES

FILM AND VIDEO COURSES

100S. Film and Video Theory and Practice. (AL) Film and video production in conjunction with comparative history and theory of these technologies. Students produce works in basic Super 8 mm, 16 mm, and small format video production. Prerequisite: Drama 173, English 101A, Literature 110, or Literature 114. C-L: Drama 142S and English 183S. One course. *Burns*

101S. Special Topics in Advanced Film, Video, or Audio Production. (AL) An in-depth investigation of a particular technology for students with demonstrated commitment and aptitude. Exploration of the theoretical assumptions behind the development of new technological arts of the twentieth century. Also offered as Literature 111S. Prerequisite: Drama 173, English 101A, or Literature 110. One course. *Staff*

102S. Film Animation Production. (AL) Experimentation with various media; mastering animation techniques such as metamorphosis, timing, articulation, storytelling, sound design, special effects, and camera. Each student to produce a one-minute animated film on the Oxberry 16mm film animation stand. C-L: Visual Arts 165S. One course. *Burns*

103S. Theory and Practice of Sound Technology. (AL) Technical basis and aesthetic motivation of sound recording and sound exploitation. Technical demonstration and student exercises explore the mechanics and dramatic and psychological implications of formats, microphone placement, mixing, acoustic signature, digital recording, double system, and sound editing, leading to an individually produced sound design for live action or animation film/video. Prerequisites: Drama 173, English 101A, Film and Video 101S, Literature 110, or Literature 111S. One course. *Staff*

104S. Documentary Film/Video Theory and Practice. (AL) The politics and aesthetics of realism. History of styles from Griersonian "propaganda" to cinema verite to "reality TV." Practical exercises in location sound, camera to subject relationship, and camera movement. Prerequisite: Drama 173, English 101A, Literature 110, or Literature 111S. C-L: Cultural Anthropology 131S and English 101C. One course. *Staff*

105S. American Communities: A Documentary Video Approach. (AL, SS) A documentary approach to the study of local communities through video production projects assigned by the course instructor. Working closely with these groups, students explore issues or topics of concern to the community. Students will complete an edited video as their final project. Prerequisites: English 101A and any one of the following: Film and Video 100S, 101S, or 104S. C-L: Cultural Anthropology 134S, History 150B, Political Science 156S, and Public Policy Studies 105S. One course. *Staff*

110S. Internship in Film and Video. Students may arrange academic work in conjunction with approved internship in the entertainment industry. Academic work must be with core faculty and include the university minimum (one research paper) as well as reading from bibliography approved by professor and/or viewing list worked out in advance. One course. *Staff*

111T. Tutorial. (AL) One course. *Staff*

CORE COURSES FROM OTHER DEPARTMENTS

For descriptions of the courses below consult the listings under the specified departments in this bulletin.

English 101A. Introduction to Film. C-L: Drama 173 and Literature 110
English 190. Television, Technology and Culture
German 161S. European Cinema in Conflict
History 104F. Documentary Film History. C-L: Literature 105 and Political Science 198
Literature 113. Studies in Comparative World Cinema. C-L: Asian and African Languages and Literature
Literature 114. Film Theory
Literature 140. History of Mass Culture in the United States. C-L: English 156
Literature 197S. Special Topics in the United States' Culture Industries. (Duke in Los Angeles)

RELATED COURSES

Art History

169. Documentary Photography and Social Action in the Nuclear Age. C-L: Comparative Area Studies. *Stiles*
172. Topics in Asian Art: East Asian Cinema. C-L: Comparative Area Studies. *Abe or Ching*

Visual Arts

116. Photography. *Noland*

Canadian Studies

282S. Canada: Media and Identity. C-L: Comparative Area Studies, Cultural Anthropology, Economics 282S, History 282S, Political Science 282S, and Sociology 282S. *Staff*

Cultural Anthropology

104. Anthropology and Film. *Litzinger*
110. Advertising and Society: Global Perspective. C-L: English 120, Sociology 160, and Women's Studies. *Luttrell, W. O'Barr, Smith, or Wilson*

Dance

146. Dancing in the Movies. *Sommer*

Drama

121S. Dramatic Writing. C-L: English 107S. *Staff*
122S. Advanced Dramatic Writing. C-L: English 108S. *Staff*
123S. Screenwriting. C-L: English 102S. *Wilson*
140S. Directing. *McAuliffe or Storer*

English

28S. Studies in Film and Video. *Staff*
101A. Introduction to Film. C-L: Drama 173 and Literature 110. *Gaines*
101B. Introduction to Cultural Studies. C-L: Literature 100. *Gaines, Radway, Surin, Tompkins, Torgovnick, or Willis*
185. Studies in Film History. C-L: Drama 174 and Literature 116. *Clum, Gaines, or Jameson*
187. Melodrama and Soap Opera. C-L: Drama 137 and Women's Studies. *Clum or Gaines*
189S. Special Topics in Film. C-L: Drama 197S. *Clum, Gaines, or Moses*
190. Television, Technology, and Culture. C-L: Literature 119. *Staff*
284. Contemporary Film Theory. *Gaines*

Film and Video

- 100S. Film and Video Theory and Practice. C-L: English 183 and Drama 142S. *Burns*
- 101S. Topics in Advanced Film, Video, or Audio Production. C-L: Literature 111S. *Burns*
- 102S. Film Animation Production. C-L: Visual Arts 165S. *Burns*
- 103S. Theory and Practice of Sound Technology. *Staff*
- 104S. Documentary Film/Theory and Practice. C-L: Cultural Anthropology 131S and English 101C. *Staff*
- 105S. American Communities: A Documentary Video Approach. C-L: Cultural Anthropology 134S, History 141S, Political Science 152, and Public Policy Studies 105S. *Staff*
- 110S. Internship in Film and Video. *Staff*
- 111T. Tutorial. *Staff*

German

- 123S. German Film History to 1945. *Risholm*
- 161. European Cinema in Conflict. *Risholm*

History

- 104B. A Survey of Latin American History through Film. *TePaske*
- 104F. Documentary Film History. C-L: History 150A, Literature 117, and Political Science 198. *Gaines, Paletz, or Wood.*

Institute of the Arts

- Institute of the Arts 105. Arts Internship in Los Angeles. *Staff*

Literature

- 112. Special Topics in National Cinema. *Staff*
- 113. Studies in Comparative World Cinema. C-L: English 122, German 113, and Russian 113. *Staff*
- 114. Film Theory. C-L: Women's Studies. *Gaines*
- 115. Sexualities in Film and Video. C-L: English 124. *Clum, Gaines, or Moon*
- 118. Experimental Film and Video. *Staff*
- 120. Special Topics in Television Genres. *Staff*
- 140. History of Mass Culture in the United States. C-L: English 156. *Gaines, Radway, Tompkins, Torgoonick, or Willis*
- 141. International Popular Culture. *C. Davidson, Gaines, Radway, or Willis*
- 197S. Special Topics in the United States' Culture Industries (Duke in Los Angeles). *Staff*
- 293. The Rise of Consumer Culture in the United States, 1880-1930. *Radway*

Music

- 169. Hollywood Film Music. *Gilliam*

Political Science

- 153, 154. Politics and the Media of Mass Communication. *Paletz*
- 203S. Issues and Problems in Politics and the Media in the United States. *Paletz*
- 227S. Issues in International Communication. *Paletz*

Public Policy Studies

- 154S. Free Press and Public Policy. *Stevens*
- 163S. Telecommunications Policy and Regulation. *Prak*
- 176S. American Communities: A Photographic Approach. C-L: Art 118S. *Harris or Sartor*
- 177S. Advanced Documentary Photography. C-L: Art 119S. *Harris*
- 180S. Writing for the Media. *Eudy or Reid*
- 181S. Advanced News Reporting. *Bates and Yeoman*

195S. Community Service and the Documentary Tradition. C-L: History 195S. *Coles or Kelley*

195.95S. Entertainment Industry: Policy and Practice. *Staff*

195.39S. Communications Frontier Technology: Media, Democracy. *Fulton*

Religion

184. Religion and Film. *Hillerbrand*

Romance Studies

French 141S. World War II and French Film. *Orr*

French 164. French Cinema. *Bell*

Italian 170S. Film and the Italian Novel. *Finucci*

Portuguese 200S. Literatura e Cinema: Os Classicos Brasileiros. *Damasceno*

Spanish 169. Spanish Cinema. *Sieburth or Vilarós*

Slavic Languages and Literature

Russian 130/230. Soviet Cinema. *Gaines, Jameson, or Lahusen*

Russian 135. Contemporary Russian Media. *Andrews*

Sociology

170. Mass Media. C-L: Canadian Studies and Comparative Area Studies. *Smith*

182. Media in Comparative Perspective. C-L: Canadian Studies, Comparative Area Studies, and Political Science 180. *Smith*

FOCUS Program Courses (FOC)

For more information see the section on FOCUS Programs in the chapter "Special Study Centers, Programs, and Opportunities."

75S. Genetics and Society in the Twentieth Century. (NS) The historical evolution of genetics and molecular biology in the twentieth century, examined within a social framework. Intended to enable students to place current issues such as the human genome project in historical perspective. From the eugenic and racial hygiene movements of America and Germany to the molecular biology revolution of the past half-century; the scientific principles underlying modern biotechnology. Open only to students in the FOCUS Program. One course. *Baker*

105. Special Topics in FOCUS. Designed to provide a forum for discussing and bridging the issues that arise in the individual seminars in the various FOCUS Programs. The subject matter and specific format of the course vary from program to program. Open only to participants in FOCUS. Pass/fail grading only. Half course. *Staff*

French

For courses in French, see Romance Studies.

Genetics

For courses in genetics, see Biology and the University Program in Genetics.

University Program in Genetics

Professor Webster, *Director* (biochemistry); Professor Nevins, *Co-Director* (microbiology and genetics); Professor Boynton, *Coordinator of the Certificate Program* (botany); Professors Antonovics (botany), Bastia (microbiology), Cullen (genetics and microbiology), Endow (microbiology), Gillham (zoology), Greenleaf (biochemistry), Hsieh (biochemistry), Joklik (microbiology), Keene (microbiology), Kredich (medicine and biochemistry), Laurie (zool-

ogy), Linney (microbiology), Modrich (biochemistry), Nicklas (zoology), Raetz (biochemistry), Rausher (zoology), Roses (neurobiology), Shaw (chemistry), Steege (biochemistry), Uyenoyama (zoology), and Ward (immunology); Associate Professors Been (biochemistry), Burdett (microbiology), Garcia-Blanco (molecular cancer biology), Greene (biochemistry), Kaufman (biochemistry), Kiehart (cell biology), Kohorn (botany), Kreuzer (microbiology), Pickup (microbiology), Schachat (cell biology), Vance (genetics), and Vilgalys (botany); Assistant Professors Capel (cell biology), Cunningham (zoology), Dong (botany), Fehon (zoology), Garrett (molecular cancer biology), Heitman (genetics and pharmacology), Hershfield (biochemistry), Honma (botany), Kornbluth (molecular cancer biology), Lew (molecular cancer biology), Lin (cell biology), Marchuk (genetics), Markert (immunology), Peterson (genetics), Sullenger (genetics), Sun (botany), Swenson (molecular cancer biology), Titus (cell biology), and Wharton (genetics and microbiology); Associate Research Professor Pericak-Vance (genetics), Assistant Research Professor Speer (medicine); Adjunct Professors Drake (National Institute of Environmental Health Sciences), Kunkel (National Institute of Environmental Health Sciences), and Resnick (National Institute of Environmental Health Science)

A certificate or concentration, but not a major, is available in this program.

GENETICS PROGRAM COURSES

191, 192. Independent Study. Directed reading and research under the supervision of faculty members from the University Program in Genetics, subject to the consent of the instructor and of the coordinator of the Certificate Program in Genetics. Variable credit. *Staff (Genetics Program)*

For descriptions of the courses below consult the listings under the specified departments in the undergraduate and graduate bulletins.

Principles of Genetics and Cell Biology I, II. (Biology 118, 119.) One course. *Staff*

Experiments in Developmental and Molecular Genetics (Biology 185L). *Fehon, Honma, Lincoln, or McClay*

Experimental Cell and Molecular Biology (Biology 184L.) One course. *Armaleo, Boynton, Dong, Gillham, or Laurie*

Independent Study. (Biology 191 and 192.) Prerequisite: consent of instructor, coordinator of the Certificate Program, and the appropriate director of undergraduate studies prior to registration.

DNA, Chromosomes, and Evolution (Biology 281.) *Laurie and Nicklas*

Molecular Genetics of Organelles. (Biology 283.) One course. *Boynton and Gillham*

Ecological Genetics. (Biology 285S.) One course. *Antonovics*

Evolutionary Mechanisms. (Biology 286.) One course. *Antonovics, Rausher, and Uyenoyama*

Mathematical Population Genetics. (Biology 288.) Calculus required; statistics and linear algebra recommended. One course. *Uyenoyama*

GENETICS CONCENTRATION FOR BIOLOGY MAJORS

Biology majors interested in completing the concentration in genetics available in that major should consult the director of undergraduate studies in biology.

CERTIFICATE IN GENETICS FOR NON-BIOLOGY MAJORS

A certificate is available in the Genetics Program to all nonbiology majors. Acceptance into the certificate program is by arrangement with the coordinator of the Certificate Program in Genetics. The program offers students an opportunity to gain expertise in modern genetics with a view to its application to biology, medicine, public policy, law, or engineering. The courses in the certificate program are taught by members of the University

Program in Genetics. Further details may be obtained from the Genetics Program office or Dr. John Boynton, Botany/DCMB.

Required Courses:

Introductory Biology

Principles of Genetics and Cell Biology I, II (Biology 118, 119)

An advanced course in molecular genetics, for example: Experimental Cell and Molecular Biology (Biology 184L) or Experiments in Developmental and Molecular Genetics (Biology 195L)

Independent study with a member of the Genetics Program (University Program in Genetics 191, 192 or Biology 191, 192)

Geology (GEO)

Professor Karson, *Chair*; Associate Professor Klein, *Director of Undergraduate Studies*; Professors Baker, Barber, Corliss, Haff, Heron, Kay, Livingstone, Perkins, Pilkey, and Schlesinger; Associate Professors Boudreau, Malin, and Rojstaczer; Assistant Professors Clark, Howd, and Lozier

A major or minor is available in this department.

The department offers introductory and advanced courses in all branches of the earth sciences including coastal geology, environmental geology, hydrology, geochemistry, geomorphology, geophysics, paleontology, petrology, sedimentology, and marine geology. The degree requirements emphasize a broad knowledge of both geology and the associated physical sciences. An option is available for one semester of study at the Duke University Marine Laboratory in Beaufort, North Carolina, to fulfill elective requirements for the degree.

10S. Analysis of Outcrops. (NS) Field interpretation of geologic features. Includes four field trips. Prerequisite: Geology 41 (may be taken concurrently). Half course. *Boudreau*

39S. The Geology of Beaches. (NS) Emphasizes field observation (seven full field days plus a weekly lecture) of geological and near-shore oceanographic processes and their role in the evolution of developed and undeveloped beaches and barrier islands. The interaction of human and coastal processes, including the problems of shoreline stabilization and the implications of global sea level rise. Open only to students in the FOCUS Program, Science, Technology, and Modern Culture. One course. *Pilkey*

41. The Dynamic Earth. (NS) Dynamic systems studied include volcanoes, earthquakes, sea-floor spreading, plate tectonics; surficial processes such as floods, glaciers, landslides, and related phenomena; and the composition of the earth including rocks and minerals. One course. *Baker, Heron, Klein, or Perkins*

43S. Application of Geologic Principles. (NS) Mineral and rock classification, topographic and geologic map interpretation. Prerequisite: Geology 41 (may be taken concurrently). Half course. *Staff*

45. Earth Systems. (NS) An introduction to environmental geography with a focus on land, air, and water resources. One course. *Rojstaczer*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

53. Introductory Oceanography. (NS) Basic principles of physical, chemical, biological, and geological oceanography. Fee for required field trip to the Marine Laboratory. C-L: Biology 53. One course. *Pilkey and Searles (biology)*

105L. Fundamentals of Mineralogy. (NS) Crystal chemistry, crystal physics, mineral identification, and genesis. Lectures or recitations, laboratory, and field trips. Prerequisite: Chemistry 12L (may be taken concurrently). One course. *Klein*

106L. Igneous and Metamorphic Rocks. (NS) Silicate mineralogy, theory of origin and classification of igneous and metamorphic rocks, and rock identification. Lectures and laboratory. Prerequisite: Geology 105. One course. *Boudreau*

110L. Stratigraphy and Sedimentology. (NS) Age relationships, correlation, classification, identification, origins, and interpretation of sediments. Lecture, laboratory, and field trip. One course. *Heron and Perkins*

112. Tropical Marine Geology. (NS) Overview of interaction between marine organisms, sediment production and alteration, depositional processes, and environments of deposition. Application of modern analogs to interpreting the Pleistocene rock record of South Florida and the Caribbean. Prerequisite: Geology 41 or Biology 25L, or consent of instructor. One course. *Perkins*

115. Introductory Applied Coastal Geology. (NS) Oceanographic and geologic processes responsible for the evolution of beaches and barrier islands. Various solutions to the global retreat of shorelines. One course. *Heron and Pilkey*

117S. Field Mapping. (NS) An introduction to the techniques used to produce a geologic map. Weekend field trips to map locations of interest. Prerequisite: Geology 41. Half course. *Boudreau or Karson*

120. Environmental Geology. (NS) A case history approach to the role of geological materials and processes in environmental assessment studies. The impact of rock type, faulting, folding, weathering, erosion, flooding, and underground fluid flow on the human environment. Cases taken from current and past geological studies of environmentally sensitive sites. One course. *Malin*

121S. The Surface of the Earth. (NS) Effects on the earth's surface of wind, water, ice, weathering, volcanism, tectonics, and human activity. Origin and nature of landforms. Prerequisite: Geology 41. One course. *Haff*

122. Models in Environmental Science. (NS) The art of setting up and solving quantitative problems in the environmental sciences involving water budgets, carbon and other chemical budgets, thermodynamics, biogeochemistry, chemical reactions, climatology, and population dynamics. Modeling based on Stella box-model program and other computer applications. One course. *Haff*

123. Hydrology. (NS) The hydrologic cycle with particular emphasis on surface water flow and associated sediment transport. Prerequisite: Mathematics 32 or consent of instructor. One course. *Rojstaczer*

130L. Principles of Structural Geology. (NS) Description, origin, and interpretation of primary and secondary geologic rock structures. Prerequisites: Geology 106L and 110L. One course. *Karson*

145. Fossils and Their Applications. (NS) Animal and plant fossils; laboratory review of invertebrate marine fossils important to paleoenvironmental interpretations. The paleoecology, functional morphology, and geochemistry of different fossil organisms related to paleoenvironmental and paleoceanographic reconstructions. Lecture, laboratory, and field trip. One course. *Corliss*

151. Global Change. (NS) Analysis of the causes and geological record of climatic change; emphasis on the Holocene. One course. *Baker*

152. Introduction to Environmental Assessment Using Geophysical Measurements. (NS) The geophysical methods used in assessing potential human impacts on environmentally sensitive sites. Included are the measurement and interpretation of gravity, magnetism, seismic waves, electrical properties, and fluid conditions. Practical examples and case

histories, with special focus on the proposed North Carolina Low-Level Radioactive Waste Site. Prerequisites: one year of physical sciences and calculus. One course. *Malin*

160. Ocean and Atmosphere Dynamics. (NS) Introduction to the dynamics of ocean and atmospheric circulations, with particular emphasis on the global climate cycle. Prerequisites: Mathematics 31 and 32, Physics 51 and 52 (or Physics 53 and 54), or consent of instructor. One course. *Lozier*

172L. History of the Earth. (NS) Evolution of the earth and organisms through time. Weekend field trip to the Appalachian Mountains. Lectures and laboratory. Not open to students who have taken Geology 72L. One course. *Corliss or Klein*

191, 192. Independent Study. Directed reading or research. Open only to qualified juniors and seniors by consent of director of undergraduate studies and supervising instructor. One course each. *Staff*

195. Independent Study for Nonmajors. Open to qualified juniors and seniors upon approval of the departmental faculty. One course. *Staff*

FOR ADVANCED UNDERGRADUATES AND GRADUATES

200. Beach and Coastal Processes. (NS) The study of sedimentary processes and geomorphology of nearshore environments with emphasis on both developed and undeveloped barrier island systems. One course. *Pilkey*

201L. Physical Processes in Coastal Environments. (NS) The physical processes on beaches, the inner continental shelf, and in estuaries, in the context of their implications for the biological and geological environments. Topics to be drawn from the origin of waves and currents, tides, turbulence and mixing transport of sand and larvae. Applications to biomechanics and coastal erosion, and to marine ecology, coastal zone management, and water quality. (Given at Beaufort.) Prerequisites: Mathematics 31 and 32. C-L: Environment 222L and Marine Sciences. One course. *Staff*

202. Beach and Island Geological Processes. (NS) Processes affecting evolution of beaches and barrier islands with emphasis on the effect of constructions. Not open to students who have taken Geology 196. (Given at Beaufort on three weekends.) C-L: Marine Sciences. Half course. *Pilkey*

203. Physical Oceanography. (NS) Introduction to the dynamic principles of ocean circulation with an emphasis on large temporal and spatial scales of motion. Topics include wind-driven and density-driven flow, western boundary intensification, mid-ocean, shelf, and tropical circulations. Prerequisites: Mathematics 31 and 32 or consent of instructor. C-L: Environment 290 and Mechanical Engineering 290. One course. *Lozier*

204. Advanced Topics in Nearshore Processes. (NS) Advanced treatment of fluid processes in the nearshore. Topics drawn from nonlinear wave theory, radiation stresses and their gradients, forced and free infragravity waves, and the origins of mean currents in the surf zone. Other topics following students' interests. (Given at Beaufort.) Prerequisite: Environment 290, Mathematics 111 or 114, or consent of instructor. C-L: Environment 268 and Marine Sciences. One course. *Staff*

205. Geological Oceanography. (NS) The geology of ocean basins, including origin, bottom physiography, sediment distribution, and sedimentary processes. Not open to students who have taken Geology 206S. (Given at Beaufort.) C-L: Environment 291 and Marine Sciences. One course. *Staff*

206S. Principles of Geological Oceanography. (NS) Geological aspects of the ocean basins including coastal to deep water sediment types and sedimentation processes, sea floor physiography and environmental problems. One course. *Pilkey*

208S. Paleoceanography. (NS) Geology, paleoceanography, and evolution of the oceans, ocean basins, and marine biota based on analysis of deep-sea sedimentary sequences. One course. *Corliss*

209S. Climate Dynamics and the Paleoclimatic Record. (NS) Introductory readings and reviews of modern physical climatology will be followed by extensive readings covering the record of past climatic change, concentrating on latest Quaternary and Holocene time. Topics include the global energy balance, the hydrologic cycle, general circulation of the atmosphere and oceans, climate modeling, future climate change, and the known record of paleoclimate (from marine and lake sediments, corals, soils, ice cores, etc.). Some background in physical sciences recommended. One course. *Baker*

215. Clastics Facies Analysis: Recent and Ancient. (NS) Modern clastic depositional systems and their ancient analogs. Prerequisite: Geology 110L. One course. *Heron*

216. Field Analysis of South Florida Carbonates. (NS) Analysis of recent sediments and organisms and their Pleistocene analogs. One-week field trip. Pass/fail grading only. Prerequisite: Geology 110L or consent of instructor. Half course. *Perkins*

218. Geological Fluid Mechanics. (NS) Physical properties of fluids. Continuity, momentum, and energy principles. Laminar and turbulent flow; potential flow; open channel flow. Applications to stream and watershed hydraulics, sediment transport, and other geological phenomena. Prerequisites: Engineering 75L, Mathematics 31 and 32, or Physics 41L and 42L. One course. *Haff*

219. Sediment Transport. (NS) The processes by which wind and water move sedimentary material. Prerequisites: Civil Engineering 122L or Geology 41 and 218. One course. *Haff*

220. Earth Surface Processes and Geomorphology. (NS) The origin, nature, and significance of natural features on the earth's surface. Content varies from year to year. Prerequisites: open to graduates and advanced undergraduates with consent of instructor. One course. *Haff*

221. Hydrogeology. (NS) Theory of groundwater flow and solute transport with application to geologic processes. Prerequisite: Chemistry 12L, Mathematics 103, Physics 42L or 52L, or consent of instructor. One course. *Rojstaczer*

222L. Statistics and Data Analysis in Earth and Ocean Science. (NS) Techniques commonly used by earth and ocean scientists for the analysis of spatial and/or temporal series of data. Topics include regression, Fourier analysis, nonparametric spectral analysis, and, perhaps, principal components analysis and parametric spectral estimators. (Given at Beaufort.) Prerequisites: Mathematics 31 and 32, Statistics 110 or 112, or consent of instructor. C-L: Environment 252L and Marine Sciences. One course. *Staff*

223. Numerical Methods in Hydrogeology. (QR) Forward and inverse modeling of groundwater flow and transport. Prerequisite: Computer Science 8 or 53, Geology 221, Mathematics 103, or consent of instructor. One course. *Rojstaczer*

225S. Advanced Topics in Hydrogeology. (NS) Hydrologic controls on the chemical and physical state of the earth's crust. Prerequisite: Geology 221 or consent of instructor. One course. *Rojstaczer*

226. Advanced Environmental Geology. (NS) A quantitative case history approach to the role of geological materials and processes in environmental assessment studies. The impact of rock type, faulting, folding, weathering, erosion, flooding, and underground fluid

flow on the human environment. Field trips to environmentally sensitive sites and original research project required. Intended for students of the environment and engineering. One course. *Malin*

230S. Advanced Structural Geology. (NS) Stress and strain emphasizing geometric, kinematic, and dynamic analysis of micro structures and mesoscopic structures. Prerequisite: Geology 130 or consent of instructor. One course. *Karson*

233S. Oceanic Crust and Ophiolites. (NS) Structure, tectonics, petrology, and geochemistry of oceanic spreading environments and ophiolite complexes. Prerequisites: Geology 106L and 130 or consent of instructor. One course. *Karson*

236S. Lithosphere Plate Boundaries. (NS) Plate tectonics and the geological and geophysical expression of orogenic belts, spreading centers, transform faults, subduction zones. Prerequisite: Geology 130 or consent of instructor. One course. *Karson*

237S. Structure and Evolution of the Appalachian Orogen. (NS) Overview of sedimentation, deformation, and metamorphism responsible for the development of the Appalachian Mountain Belt from Newfoundland to Alabama in the context of plate tectonics. Prerequisites: Geology 106L, 110L, and 130 or consent of instructor. One course. *Karson*

239S. Advanced Topics in Structural Geology and Tectonics. (NS) Selected topics related to deformation of rocks ranging from microstructure to plate tectonics. Prerequisite: Geology 130 or consent of instructor. One course. *Karson*

249. Marine Micropaleontology. (NS) Introduction to marine microfossils, basic principles of micropaleontology and stable isotope geochemistry with applications to paleoceanography. Lectures and laboratory. One course. *Corliss*

252. Introduction to Environmental Assessment Using Geophysical Measurements. (NS) The geophysical methods used in assessing potential human impacts on environmentally sensitive sites. Included are the measurement and interpretation of gravity, magnetism, seismic waves, electrical properties, and fluid conditions. Practical examples and case histories, with special focus on the proposed North Carolina Low-Level Radioactive Waste Site. Same as Geology 152 except extra projects. Prerequisites: one year of physical sciences and calculus. One course. *Malin*

269. Thermodynamics of Geological Systems. (NS) Introductory thermodynamics applied to geologic problems through understanding of phase equilibrium. Prerequisites: Geology 105L (may be concurrent) and Mathematics 32. One course. *Boudreau*

270. Sedimentary Geochemistry. (NS) Chemistry of aqueous solutions and authigenic minerals in sedimentary systems. Prerequisites: Chemistry 12L and Mathematics 32. One course. *Baker*

272. Biogeochemistry. (NS) Processes controlling the circulation of carbon and biochemical elements in natural ecosystems and at the global level, with emphasis on soil and surficial processes. Prerequisite: Chemistry 12L or equivalent. C-L: Biology 272. One course. *Schlesinger*

273S. Analytic Techniques. (NS) An introduction to advanced analytic procedures used in the earth sciences: such as electron microbeam techniques (scanning electron microscopy, electron microprobe analysis) and plasma emission/absorption spectroscopy. Consent of instructor required. Half course. *Boudreau and Klein*

285S. Layered Intrusions. (NS) Survey of layered igneous intrusions and current theories on crystallization and other processes in mafic magmas. Offered alternate years. Prerequisites: Geology 105L and 106L or consent of instructor. One course. *Boudreau*

295S. Advanced Topics in Geology. (NS) Topics, instructors, and credits to be arranged each semester. Variable credit. *Staff*

COURSES CURRENTLY UNSCHEDULED

214S. Sedimentary Petrography. (NS)

217. Field Analysis of Ancient Sedimentary Sequences. (NS)

250. Applied Mathematics for the Environmental and Earth Sciences. (QR)

258S. Advanced Topics in Geophysics: Interdisciplinary Approaches to Problems in Tectonics, Seismology, and the Environment. (NS)

260S. Applied Subsurface Stratigraphy. (NS)

271. Isotope Geochemistry. (NS)

275. Economic Geology. (NS)

283S. Experimental Methods in Geology. (NS)

292. Computer Methods in Geology. (NS)

THE MAJOR

The Department of Geology offers one A.B. option and three B.S. tracks for a major in the department.

For the A.B. Degree

The A.B. degree in earth sciences is designed to be a flexible major for those students whose interest is in the professional fields allied to geology (for example, land use planning, resources management, environmental law, engineering geology, or secondary education). It is not intended for those who plan on pursuing advanced studies in the earth sciences or becoming professional geologists.

Prerequisites. Geology 41, 43S (half course), 53; Chemistry 11L and 12L, Mathematics 31 and 32, Physics 41L and 42L (or 51L and 52L, or Physics 53L and 54L).

Major Requirements. Geology 172L and seven additional courses, 100-level or above, including at least three in geology, that are related to the student's interest. These courses must be approved in advance by the director of undergraduate studies, who may consult with the student's advisor.

For the B.S. Degree

Prerequisites. Geology 41, 43S (half-course), and 53; Chemistry 11L and 12L; Mathematics 31 and 32; either Physics 41L and 42L (or Physics 51L and 52L, or Physics 53L and 54L) or Biology 25L (for the biological oceanography option only).

The Department of Geology offers three programs leading to a B.S. degree:

Geology: Preparatory to Advanced Studies in Geology

The B.S. degree in geology provides a strong background for graduate work in the earth sciences for those who wish to become academic or professional geologists in any of its many subfields.

Major Requirements. Required courses include Geology 105L, 106L, 110L, 130, 172L, Statistics 110 or 112, a field course normally taken during the summer after the junior year, and two electives above Geology 100 (or approved substitutions*).

Although not specifically required, students interested in advanced studies in the following fields should consider taking the additional courses during their undergraduate career, and with the advice of their faculty advisor.

**Approved elective course substitutions:* Mathematics 103, 104, 111, 114, Chemistry 151, 161, Computer Science 50, Physics 181, 182, 230, 231. Others with approval of the Department of Geology faculty and the director of undergraduate studies.

Students interested in advanced studies in geochemistry, hydrogeology, petrology, or structural geology should consider taking the following additional courses: second-year mathematics (ordinary differential equations, linear algebra), computer programming, and physical chemistry.

Students interested in advanced studies in geophysics should consider taking the following additional elective geology courses: Geology 251, 255, 256, and 258. In addition, they should also consider taking courses in classical mechanics, electricity and magnetism, second-year mathematics (ordinary differential equations, linear algebra), and mathematical physics.

Students interested in advanced studies in paleontology should consider taking the following additional elective geology courses: Geology 145, 208, 249. They should also consider taking additional postintroductory courses in anatomy, biology, botany, and ecology.

Geology: Preparatory to Advanced Studies in Oceanography

The B.S. in oceanography is designed for those who wish to pursue advanced studies in geological oceanography and biological oceanography.

Major Requirements. Geology 160, Statistics 110 or 112. Four from one of the following options: Geological Oceanography option: Geology 105L, 110L, 112L, 172, 203, 206, Biology 114, Biology 115. Biological Oceanography option: Geology 112, 172, 203, 206, 208, Biology 110, Biology 114, Biology 115, Biology 123, Biology 150. For both options, two elective 100-level or above geology courses (or approved substitutions*) are required.

Although not specifically required, students interested in advanced studies in geological oceanography should consider taking the following additional courses during their undergraduate careers with the advice of their faculty advisor: second-year mathematics (ordinary differential equations, linear algebra), computer programming, organic and physical chemistry. Students interested in biological oceanography should consider taking additional postintroductory courses in biology, botany, and ecology.

Geology: Preparatory to Advanced Studies in the Environmental Earth Sciences

Interested students may work with departmental faculty members to plan a specialized course sequence in a variety of areas relating to environmental earth sciences. Areas of specialization include coastal studies, global change, hydrology, earth surface processes (geomorphology), and environmental geology. Courses in these areas can be combined with related courses in departments such as botany, civil and environmental engineering, zoology, and the School of the Environment to create an educational experience tailored to individual student interests.

Major Requirements. Geology 121, 123, 160, 172; Statistics 110 or 112. Three 100-level or above courses in geology (or approved substitutions*).

Additional recommended courses. Students interested in advanced studies in environmental earth sciences should consider taking additional courses in the following fields during their undergraduate careers with the advice of their faculty advisor: second-year mathematics (ordinary differential equations, linear algebra), computer programming, and postintroductory chemistry courses. Students who are interested in field research are strongly urged to take a semester at the Beaufort Marine Lab or a geology summer field course, but note that geology summer field camps usually require Geology 106, 110, and 130 as prerequisites.

*Approved elective course substitutions: Mathematics 103, 104, 111, 114, Chemistry 151, 161, Computer Science 50, Physics 181, 182, 230, 231. Others with approval of the Department of Geology faculty and the director of undergraduate studies.

Honors/Distinction

The department through Trinity College offers graduation with distinction by honors project. A candidate for graduation with distinction in geology must have a departmental grade point average of 3.0 at the beginning and the end of the project to qualify for departmental nomination. The student will apply for consideration in the honors program by the end of his or her junior academic year by writing a letter of intent to the director of undergraduate studies. A committee of three faculty members, including the director of undergraduate studies, will review the student's record and decide to admit or reject the application. If the student is accepted, a faculty member within the department will be assigned to work with the student as an advisor to the honors project. This project will consist of an original piece of scientific research which will be summarized by a written report in the style of a scientific publication in geology before the end of classes of the final semester. The student will normally do the work as part of an independent study course (Geology 191, 192), but it may be part of other course work as well. The student will also make an oral presentation to students and faculty of the department before the end of classes of the final semester. The decision on granting honors will be made by a vote of the faculty, with a majority in favor needed to grant honors. Students who are not granted honors will receive credit for the independent study.

THE MINOR

Prerequisites. Geology 41, 43S (half course), 53; Chemistry 11L and 12L; Mathematics 31 and 32; Physics 41L and 42L (or Physics 51L and 52L, or Physics 53L and 54L).

Requirements. Geology 172L and four additional 100-level courses or above, with at least two in geology, that are related to the student's interest. These courses must be approved in advance by the director of undergraduate studies, who may consult with the student's advisor.

TEACHER CERTIFICATION

A geology major who is interested in teaching in secondary schools is encouraged to earn a comprehensive science teaching certificate in addition to the bachelor's degree. The teaching certificate, which is earned by fulfilling requirements prescribed by the state of North Carolina, is generally accepted in most of the fifty states by reciprocal agreement. In addition to completion of any of the geology major tracks as described above (the A.B. option is particularly suited for those interested in a teaching certificate), the requirements for the comprehensive science teaching certificate include course work in biology, chemistry, physics, an appropriate course in psychology, and several courses in education. The last semester of the senior year is devoted to the student-teaching block, including two special, accelerated courses and ten weeks of full-time teaching and observation in the schools, working with a certified teacher and with Duke faculty. Anyone considering secondary school teaching should confer with the director of undergraduate studies as well as Professor Malone in the Program in Education as soon as possible.

Germanic Languages and Literature

Professor Rolleston, *Chair*; Professor Borchardt, *Director of Undergraduate Studies*; Assistant Professor Walther, *Director of Language Program*; Professor Alt; Associate Professors Hell, Morton, and Rasmussen; Assistant Professor Risholm; Professor Emeritus Phelps; Assistant Professor Emeritus Bessent; Adjunct Assistant Professor Keul; Lecturers Dowell and Johns

A major or minor is available in this department.

GERMAN (GER)

Language

1-2. First-Year German: Introduction to German Language and Culture. (FL) Four-skill (understanding, speaking, reading, writing) communicative approach to the language of everyday life in German-speaking countries, the language of their histories and societies, their arts and letters. Resources include audio, video, and computer-based materials. Two courses. *Walther and staff*

14. Intensive German. (FL) Accelerated introduction to German, combining in one semester the work of German 1-2. Classroom theory and practice with extended exposure to language laboratory and computer programmed instruction. Consent of director of undergraduate studies required. Two courses. *Staff*

15. German for Reading Knowledge. (FL) Foundations of German grammar and syntax; emphasis on vocabulary and complex verbal structures. Not open for credit to students who have completed German 1-2, 14, or the equivalent. Students continuing German after German 15 should take the placement test. One course. *Staff*

German 66, 67, and 69 are usually followed by 100S, 117S, 121S, or 122S.

65-66. Intermediate German. (FL) Comprehensive review of German grammar, vocabulary building, reading, and writing skills through topic-oriented syllabus. Literary and nonliterary texts from a variety of media (books, newspapers, audio, video, film, internet) provide basis for discussion and cultural knowledge. Increased focus on reading, speaking, essay writing. Prerequisite: German 1-2, 14 or equivalent; for German 66 alone, appropriate placement test score or consent of instructor. Two courses. *Walther and staff*

67. Intensive Intermediate German. (FL) Intensive grammar review and practice of spoken and written German combining in one semester the work of one year of intermediate German. Taught only in the Berlin Fall Semester Program. Prerequisite: German 1-2, 14, or equivalent. Two courses. *Staff*

69. Accelerated Intermediate German. (FL) Emphasis on utilizing grammatical structures in meaningful contexts, further development of reading, listening, speaking, and writing skills. Written texts provide material for additional insight into German culture. Students desiring in-depth grammar explanations should consider taking German 65-66 (Intermediate German) instead. One course. *Walther and staff*

98, 99. Introduction to German. One or two course credits for Advanced Placement in German. One course each.

100S. Business German. (FL) Introduction to the language of commerce and industry; modes of expression for technology and marketing. Consent of instructor required. One course. *Dowell*

117S, 118S. German Conversation and Composition. (FL) Primarily conversation with oral and written reports, based on works by contemporary writers. Required for German majors; other students by consent of instructor. One course each. *Dowell or Johns*

204S. Advanced Business German. (FL) Topics include contract negotiations, management goals and strategies, banking and financial instruments, environmental issues. Prerequisite: German 100S or consent of instructor. One course. *Dowell*

Literature and Culture

121S, 122S. Introduction to German Literature. (AL, FL) Principal authors, genres, concepts, and works of German literature. 121S: Middle Ages to the Baroque. 122S: Enlightenment to the present. One course each. *Staff*

123S, 124S. Undergraduate Seminars. (AL, FL) Topics vary. One course each. *Staff*

126S. Rilke, Kafka, Mann. (AL, FL) The shaping of twentieth-century thought by those literary figures whose writing has become world literature. One course. *Borchardt, Morton, or Rolleston*

130S. From Enlightenment to Classicism. (AL, FL) The major literary and cultural movements of the eighteenth century: Enlightenment, sentimentalism, *Sturm und Drang*, Weimar classicism. Representative works of Lessing, Klopstock, Herder, Goethe, Schiller, and Lenz. One course. *Morton*

131S. The Novelle. (AL, FL) The unique German prose genre from Tieck, Kleist, Grillparzer, Keller, Droste-Hülshoff to Hauptmann, Kafka, and Grass. History and theories from romanticism to naturalism. One course. *Alt or Morton*

133S. Introduction to German Drama. (AL, FL) The German theater from Lessing to Brecht, focusing on drama as both form and historical context. Topics may include: the Trauerspiel, *Sturm und Drang*, expressionism, epic theater, documentary drama. One course. *Risholm*

136S. Contemporary Germany. (AL, FL) The current literary scene in its cultural, social, and political contexts. C-L: Comparative Area Studies. One course. *Hell*

137S. Introduction to Twentieth-Century German Women Writers. (AL, FL) This century's preeminent German women writers placed in historical and cultural context. Elementary concepts of literary analysis; emphasis on speaking and writing German. Readings in Bachmann, Seghers, Wolf. Other authors may include: Aichinger, Fleisser, Frischmuth, Kaschnitz, Leutenegger, Morgner, H. Müller, Rinser, Struck. C-L: Women's Studies. One course. *Hell or Rasmussen*

Courses Taught Overseas

119S. Advanced German Language and Culture. (CZ, FL) Advanced grammar review with emphasis on phonetics and conversation, literature, films, museums, and theater performances. Taught only in the Berlin program. Fulfills requirements for German 117S and 118S. Prerequisite: German 65-66, or German 67 or 69. Two courses. *Wohlfel*

150. Advanced Grammar, Composition, and Current Issues. (FL) Advanced grammar review with emphasis on German expository style. Discussion of current events based on newspaper articles, videos, and television programs. Offered as a part of the summer program at the University of Erlangen. One course. *Koeppel*

151S. Advanced Intensive German. (FL) For advanced students to increase all four language skills: comprehension, speaking, reading, and writing. Discussion of current events based on newspaper articles, radio and television reports. Preparation for the German language examination required of all foreign students enrolling at German universities. Equivalent of German 117S or 118S but offered only in the Berlin semester program. One course. *Staff*

152S. Berlin in Literature and Culture. (AL, FL) Literary works of modern German writers; focus on the city of Berlin and its unique cultural and political heritage due to Germany's division from 1945-1989. Emphasis on art and architecture of Berlin reflecting both historical trends and political ideologies such as National Socialism and Marxism.

Taught only in the Berlin semester program. C-L: Comparative Area Studies. One course. *Wohlfel*

153. Aspects of Contemporary German Culture. (CZ, FL) Site visits, lecture, and discussion. Offered as part of the summer program at the University of Erlangen. C-L: Comparative Area Studies. One course. *Staff*

154. Deutsche Kulturgeschichte. (CZ, FL) The larger historical, political, and cultural developments and their influences on present-day Germany. Offered as a part of the summer program at the University of Erlangen. C-L: Comparative Area Studies. One course. *Staff*

155. Advanced German Cultural Studies. (CZ, FL) Topics vary. Taught in German and only in the Berlin Semester Program. Prerequisite: P.N.d.S. (successful completion of German Language exam administered by the Free University). One course. *Staff*

Courses Taught in English

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

113. Studies in Comparative World Cinema. (AL) See C-L: Literature 113; also C-L: English 122, Film and Video, and Russian 113. One course. *Staff*

123A, S. Special Topics. Taught in English by visiting faculty. One course. *Staff*

160. German Life and Thought. (CZ) A survey of what the well-educated German knows about German-speaking Europe, from antiquity to the present, with a stress on generally less familiar periods. Architecture, art, education, literature, music, philosophy, and science. Taught in English. C-L: Comparative Area Studies. One course. *Borchardt*

161. European Cinema in Conflict: The Metropolis, War, Globalization, and the Everyday. (AL) History of European cinema via themes of the city, of war and memory, and of Europe's relations with the rest of the world. Films by Eisenstein, Lang, Resnais, Herzog, and others. Open only to students in the FOCUS Program, Twentieth-Century Europe. One course. *Risholm*

164S. Medieval German Literature. (AL) Outstanding medieval texts in relation to contemporary literary theory: *Tristan and Isolde*, *The Nibelungenlied*, *Wolfdietrich*, poetry by Walther von der Vogelweide, ballads, religious texts. Taught in English. C-L: Medieval and Renaissance Studies. One course. *Rasmussen*

165S. The Vikings and their Literature. (AL) Old Norse culture and literature. Texts include the older and younger *Edda*, *Njal's Saga*, *Volsungasaga*, *Vinlandssaga*. Taught in English. C-L: Medieval and Renaissance Studies. One course. *Keul*

180. Faust and the Faust Tradition. (AL) Goethe's great work in the context of its intellectual and cultural inheritance and legacy. Taught in English. One course. *Borchardt or Morton*

Independent Study and Honors Seminars

191, 192. Independent Study. Directed reading and research. Open only to qualified students in the junior year, by consent of the director of undergraduate studies. One course each. *Alt, Borchardt, Hell, Morton, Rasmussen, Risholm, Rolleston, or Walther*

193, 194. Independent Study. Directed reading and research. Open only to qualified students in the senior year, by consent of the director of undergraduate studies. One course each. *Alt, Borchardt, Hell, Morton, Rasmussen, Risholm, Rolleston, or Walther*

197S, 198S. Honors Program Sequence. (AL, FL) 197S: Senior Colloquium; team taught. 198S: Preparation and writing of research paper. See section on *Honors* under description of the major. One course each. *Staff*

For Graduates and Advanced Undergraduates

200S. Proseminar: Introduction to Literary Criticism. (AL, FL) Literary theory within the framework of Germanistik, combining a survey of the major critical approaches which developed after 1945 with the discussion of several paradigmatic readings of literary texts. Approaches studied include New Criticism, hermeneutics, Marxist critical theory, reception aesthetics, structuralism, poststructuralism, and feminist literary criticism(s). One course. *Hell*

201. Introduction to Medieval German: The Language of the German Middle Ages and Its Literature. (AL, FL) Fundamentals of medieval German language acquired through readings in the original Middle High German of Arthurian romance, heroic epic, and courtly poetry. C-L: Medieval and Renaissance Studies. One course. *Rasmussen*

202S. Medieval Seminar. (AL, FL) Topics may include: heroic epic, courtly epic, medieval poetics, German lyric poetry from the twelfth to the fifteenth century. Solid reading knowledge of modern German and some knowledge of medieval German required. C-L: Medieval and Renaissance Studies. One course. *Rasmussen*

203S. Sex, Gender, and Love in Medieval German Literature. (AL, FL) Historical contexts for emergence of courtly love and the role of desire and interpretation in Gottfried von Strassburg's *Tristan und Isolde*, courtly love lyric, "maere." C-L: Medieval and Renaissance Studies. One course. *Rasmussen*

210S. Renaissance and Reformation. (AL, FL) The development of "personality" from "type" to "individual" in German culture in the great transition from medieval to early modern times, with examples from literature, history, art, architecture, music, science, and religion. Emphasis on the Italian connection, northern mysticism, Prague in the fourteenth century, fifteenth-century poetry and prose, and Luther. C-L: Medieval and Renaissance Studies. One course. *Borchardt*

215S. German Baroque Literature. (AL, FL) German literature of the grand gesture, of performance, of public posture; poetry of rhetoric; prose of the scoundrel, adventurer, and ne'er-do-well. C-L: Medieval and Renaissance Studies. One course. *Borchardt*

225S. Introduction to Goethe. (AL, FL) Major works of lyric, narrative, drama, and theory, throughout Goethe's career. One course. *Morton*

226S. Goethe's *Faust*. (AL, FL) Goethe's masterpiece and life's work, conceived as a summation of Western literature and mythology for the modern age. One course. *Borchardt or Morton*

227S. Goethe Seminar. (AL, FL) Selected texts or other aspects of Goethe's life and work not treated in German 225S or 226S. Topics may include autobiography, scientific writings, longer novels, late lyrics, literary theory and criticism, as well as others. One course. *Morton*

229S. Schiller: Aesthetic Theory and Practice. (AL, FL) The nature and function of the artist and the work of art, in Schiller's essays, poetry, and dramas. One course. *Borchardt, Morton, or Rolleston*

230S. German Romanticism. (AL, FL) The emergence in the 1790s of a new cultural language: categories of self, history, interpretation, irony, and revolution. Theory, fiction, and poetry by Novalis, the brothers Schlegel, Tieck, Brentano, Eichendorff, Hoffmann, and Heine. One course. *Rolleston*

232S. The Lyric: Goethe to the Present. (AL, FL) Poetry and its cultural meanings from versions of the modern *Ich* generated by Goethe, Hölderlin, and the romantics to the ironic new subjectivity of the 1970s. Emphasis on Mörike, Heine, Droste-Hülshoff, Rilke, Benn, Celan, Enzensberger, and Karin Kiwus. One course. *Rolleston*

233S. German Theater as Anti-Drama. (AL, FL) The story of modern and postmodern drama with emphasis on Lenz, Büchner, Grabbe, Schnitzler, Brecht, Frisch, Dürrenmatt, Handke, expressionist drama, and Piscator's political theater. C-L: Drama 220S. One course. *Alt*

236S. Empires of the Mind: Nineteenth-Century German Ideas. (AL, FL) Selected topics in politics, religion, society, and history in the nineteenth century: Heine, Hegel, Schopenhauer, Feuerbach, Marx, Nietzsche, Burckhardt, Treitschke, Ranke, D. F. Strauss, Tönnies, Weber, Freud. One course. *Alt*

242S. Expressionism. (AL, FL) Stories, poetry (Heym, Trakl, Benn), drama (Kokoschka, Hasenclever), music (Schönberg), film, and theoretical statements from the period 1910-1920; the conception of a unified art through the new dominance of the visual; dada and surrealism in context. One course. *Rolleston*

245S. The Twentieth Century. (AL, FL) The major movements and writers from the expressionists, Thomas Mann, Kafka, Rilke, and Brecht, to Böll, Grass, Handke, and Christa Wolf. Emphasis on relations between text and history: World War I, Weimar, Third Reich, and the struggle to integrate past and present in post-Holocaust literature. One course. *Rolleston*

246. German Letters in the Third Reich and in Exile. (AL, FL) German literature, drama, and film inside and outside Nazi Germany. Theoretical readings in Bloch, Benjamin, and others. One course. *Hell*

247S. Postwar German Literature. (AL, FL) The development of German literature after 1945. Topics vary: German literature between 1945 and the founding of the two states; the GDR novel and the question of realism; GDR drama after Brecht; West German literature. One course. *Hell*

250S. German Literature and Classical Antiquity. (AL, FL) The reception of Greece and Rome in German letters; the triumph and decline of classical rhetoric; the idea of the "classical"; antiquity as model and reproach. One course. *Borchardt*

253S. The Image of America in German Literature. (AL, FL) Selected readings in the myth of America (Jantz's "America in German Poetry and Thought"), including various genres from the eighteenth to the twentieth centuries, specifically texts by Goethe, Heine, Sealsfield, Kürnberger, Willkomm, Gerstäcker, Lenau, Solger, Kafka, Brecht, and Frisch. One course. *Alt*

254S. Literature by Women. (AL, FL) Topics may include: the beginnings of women's writing; gender, history, and literary representation in the work of twentieth-century women writers; women writers from World War II to the present. Bachmann, Fleisser, Keun, Kolmar, Langgässer, Lasker-Schüler, Leutenegger, Rinser, Sachs, Seghers, and Wolf. Not open to students who have taken German 137S. C-L: Women's Studies. One course. *Rasmussen*

Linguistics

260. History of the German Language. (FL) Phonology, morphology, and syntax of German from the beginnings to the present. C-L: Linguistics and Medieval and Renaissance Studies. One course. *Rasmussen*

261. Second Language Acquisition Theory and Practice. (FL) Overview of current research in the fields of second language acquisition and foreign language pedagogy, theories

of language acquisition and learning, implications for the teaching of the German language, literature, and culture at all levels. Readings and discussions on theoretical and professional issues, training in contemporary teaching techniques, approaches, and methods. One course. *Walther*

262. Applied Linguistics. (FL) The application of modern linguistic principles to a systematic study of the phonetics, morphology, and syntax of modern German. C-L: Linguistics. One course. *Staff*

Courses Taught in English

248S. German Film from Weimar to Fascism. (AL, CZ) German film from its inception through the Nazi period. Emphasis on the social, political, and cultural background of the period as well as specifics of film form and analysis. Focus on areas such as expressionist cinema, the realist film, Nazi propaganda and entertainment films. Taught in English. One course. *Risholm*

249S. New German Cinema. (AL, CZ) Postwar German film beginning with the popular "homeland" film and moving on to New German Cinema, emphasizing the social, political, and cultural background of the period. Diverse topics such as feminist filmmaking, auteur artists, contemporary cinema, and the Nazi past. The writings of filmmakers as well as theoretical issues in film criticism. Taught in English. One course. *Risholm*

270. Consciousness and Modern Society. (CZ) The blend of philosophy, literature, and sociology in German thinking about actual and possible societies. The idea of consciousness as producing involvement, detachment, or transformation. Marx, Nietzsche, Lukacs, Freud, Marcuse, Benjamin, Adorno, and Habermas. Taught in English. C-L: Comparative Area Studies. One course. *Rolleston*

271S. Contemporary Theory and the German Tradition. (AL) The reorientation of Western thought toward theories of knowledge and of language, from the eighteenth century to the present, and the significance of that paradigm shift for contemporary theory of literature and literary criticism. Readings in Kant, Herder, Mauthner, Wittgenstein, Heidegger, Habermas, and Apel. Taught in English. One course. *Morton*

299S. Seminar in German Studies. (CZ) Review of current debates and historical perspectives in the German cultural field, structured through contributing disciplines: social and economic history, political theory and history, literature, fine arts, music, philosophy, and religion. Team-taught, involving a wide range of faculty in the German Studies Program. Taught in English. One course. *Morton or Rolleston and staff*

Courses Currently Unscheduled

125S. Literature of Tolerance. (AL, FL)

132S. The Märchen. (AL, FL)

135. German Literature and the Media. (AL, FL)

170S. The German Enlightenment and the Invention of Modernity. (AL)

174S. In Search of the Self: The German *Bildungsroman*. (AL)

185S. The Golden Twenties. (AL)

220S. Reason and Imagination: The German Eighteenth Century. (AL, FL)

231S. Romantic Outsiders. (AL, FL)

235S. Nineteenth-Century German Literature. (AL, FL)

240S. Naturalism and Beyond: The Turn of the Century. (AL, FL)

241S. Nietzsche. (AL, FL)

244A, S. International Expressionism. (AL)

244B, S. International Modernism. (AL)

251S. Germanic Mythology and Its Critics. (AL, FL)

- 252S. The Mystical Tradition. (AL, FL)
- 255S. Paradigmatic Issues in Literary Theory. (AL, FL)
- 272S. The German Literature of Fantasy. (AL)
- 273S. Franz Kafka and Thomas Mann. (AL)
- 274S. The Image of America in German Literature. (AL)
- 275S. German Women Writers. (AL)

YIDDISH (YDH)

1, 2. **Elementary Yiddish. (FL)** A thorough study of elementary Yiddish grammar with reading, composition, and oral practice. No previous knowledge of German or Hebrew required. C-L: Judaic Studies. One course each. *Staff*

Courses Currently Unscheduled

- 171. Yiddish Fiction in Translation. (AL)
- 191, 192. Independent Study

THE MAJOR

Students majoring in German develop language skills in their cultural and literary context. The international and humanistic emphasis makes the German major an appropriate companion to technical and career-oriented concentrations. Numerous opportunities are available, including programs of study abroad, interdisciplinary programs, and Fulbright and German Academic Exchange Service (DAAD) scholarships.

The German major offers two tracks: (1) German and (2) German Studies.

German

Requirements. Ten courses, which may include two courses below the 100 level. Eight of the ten courses must be at the 100 level or above, including at least two at the 200 level. These must normally include the advanced conversation and composition courses, German 117S and 118S (or the equivalent taught in Berlin; German 119S, two courses) and either German 121S or 122S. Of departmental courses taught in English, only one may count toward the major.

German Studies

Requirements. Ten courses at the 100 level or above. Courses taken in the department must normally include German 117S and 118S (or the equivalents taught in Berlin; German 119S, two courses), and at least two courses at the 200 level. Two of the ten courses may be taken in other departments with the approval of the director of undergraduate studies in German, provided such courses evince a clear focus on German culture, society, and history.

Honors/Distinction

Qualified students (see the section on honors in this bulletin) may apply or be invited to apply for graduation with distinction. The application deadline is preregistration for the fall semester of the senior year. Further information may be obtained from the director of undergraduate studies or the departmental honors representative.

THE MINOR

German

Requirements. Five courses at the 100 level or above, only one of which may be taught in English.

German Studies

Requirements. Five courses at the 100 level or above, at least three of which must be taught in German. Two of the five courses may be taken in other departments with the approval of the director of undergraduate studies in German, provided such courses evince a clear focus on German culture, society, and history.

Greek

For courses in Greek, see Classical Studies.

Health, Physical Education, and Recreation (PE)

Professor Buehler, *Chair*; Associate Professor LeBar, *Director of Undergraduate Studies*; Associate Professors Harvey, Raynor, and Skinner; Assistant Professor of the Practice J. Ogilvie; Lecturer Yakola; Part-Time Instructors Alberici, Alleva, Beguinet, Bowen, Bowers, Burk, Coffman, Daffron, Duskey, Gilburg, Jindra, McMullan, N. Ogilvie, Orr, Peterson, Rollins, and Spector

Courses in this program do not count toward distributional requirements.

ACTIVITY COURSES

Each activity course listed below carries a half-course credit and is given on a pass/fail basis. The maximum amount of credit that counts for the undergraduate degree is one full course, but additional courses may be taken without credit toward graduation. Students may repeat activity courses but will not receive credit for the repeated courses, with the exception of Physical Education 15, Weight Training.

10. Bowling. History of bowling; complete fundamentals and techniques; types of games; basic rules and scoring. Half course. *Bowen*

11. Cardiorespiratory Conditioning. Individualized programs in walking, jogging, running, cycling, and swimming. Half course. *Buehler*

12. Aerobic Dance. Dancing for cardiovascular and physical conditioning. Half course. *Jindra*

13. Weight Control. Individualized exercise and diet programs. Consent of physician required. Half course. *Staff*

14. Stress Management and Performance Enhancement. Visualization, imagery, and relaxation techniques. Mind-body medicine approaches to life-style change. Sports psychology theories. Half course. *Burk*

15. Weight Training. Progressive, cumulative, and measurable physical conditioning. Half course. *Harvey*

16. Endurance Swimming. Individualized programs to improve skills and fitness. Half course. *J. Ogilvie*

17. Mountain Biking. Individualized programs in mountain biking including bike maintenance, safety tips, single- and multi-track riding. Half course. *Yakola*

20. Beginning Swimming. Propulsion techniques, water safety, introduction to the five basic strokes. Half course. *J. Ogilvie*

21. Intermediate Swimming. Development of the five basic strokes, overarm side trudgen, and trudgen crawl. Half course. *J. Ogilvie*

22. Lifeguard Training. American Red Cross course which prepares an individual to qualify as a *non-surf* lifeguard. Preventative lifeguarding, emergencies, health and sanitation, water rescue and special situations, search and recovery operations, weather and environmental conditions. Corequisites: must have CPR and Red Cross Standard First Aid certification by the end of the course in order to receive Lifeguard Training certification. Half course. *J. Ogilvie*

23. Water Aerobics. Aerobic and anaerobic exercise performed in water, designed to promote physical conditioning. Half course. *J. Ogilvie*

24. Basic Rescue and Emergency Water Safety. Prerequisite for Water Safety Instructors Course. Half course. *J. Ogilvie*

25. Water Safety Instructors Course. American Red Cross Water Safety Instructors certification. Prerequisite: Physical Education 24. Half course. *J. Ogilvie*

27. Kayaking. Basic skills for kayaking in whitewater. Half course. *Harvey*

28. Canoeing. Basic skills for canoeing in whitewater. Half course. *Staff*

29. Water Polo. Prerequisite: Physical Education 16 or consent of instructor. Half course. *Forbes*

30. Beginning Golf. Half course. *Coffman*

31. Intermediate Golf. Stroke development and use of all clubs. Half course. *Coffman*

32. Advanced Golf. Use of all clubs; course strategy. Emphasis on playing. Half course. *Coffman*

35. Beginning Racquetball. Half course. *Staff*

36. Intermediate Racquetball. Strategy of the game; stroke development. Half course. *Staff*

40. Beginning Tennis. Half course. *LeBar*

41. Intermediate Tennis. Strategy of the game and stroke development. Half course. *LeBar*

42. Advanced Tennis. Stroke development with emphasis on strategy. Half course. *LeBar*

50. Mixed Competitive Tennis. Half course. *LeBar*

52. Fencing. Foils, épée, and saber. Half course. *Beguinet*

53. Intermediate Fencing. Further study of basics and theory. Half course. *Beguinet*

55. Self-Defense: Karate. Fundamentals of selected martial arts. Half course. *Bowen*

56. Intermediate Karate. Continued practice of basic technique. Introduction to round kick, back kick, free sparring, four Pinan Katas of the Wadoryu System. Half course. *Bowen*

59. Aikido. A method of unarmed self-defense that encourages discipline and a nonviolent attitude. Half course. *Bowen*

60. Volleyball. Half course. *Peterson*

62. Intermediate Aikido. A method of unarmed self-defense combining movements taken from sword and spear fighting, jujitsu, and aikijitsu. Half course. *Bowen*

65. Yoga. Traditional hatha yoga combined with balanced structural alignment to develop strength, flexibility, and mental concentration. Half course. *Orr or Spector*

66. Intermediate Hatha Yoga. Continuation of hatha yoga postures and awareness of breathing to develop more flexibility and calmness. Yoga philosophy. Prerequisite: previous experience with yoga. Half course. *Spector*

71. Country/Western Dancing. Texas two-step, East Coast swing, cha-cha, waltz, and country line dancing. Half course. *Daffron*

72. Social Dancing. Waltz, foxtrot, tango, cha-cha, rumba, jitterbug, rock, disco, and others. Half course. *Daffron*

73. Intermediate Social Dance. Review of dances in Physical Education 72. Advanced movements in these dances and beginning movements in slow dancing, California two-step, and West Coast swing. Introduction to international and modern ballroom dance. Prerequisite: Physical Education 72 or equivalent. Half course. *Daffron*

79. Beginning Equitation. Introduction to horseback riding: basic horsemanship; walk, trot, and canter. Half course. *Rollins*

80. Intermediate Equitation. Skills in hunt seat riding. Emphasis on balance seat and focus on improving skills in walk, trot, canter, and jumping. Half course. *Rollins*

81. Advanced Equitation: Hunt Seat. Cross-country and stadium jumping techniques. Half course. *Rollins*

90. Advanced First Aid and Cardiopulmonary Resuscitation. Certification in advanced first aid and CPR. Half course. *Raynor*

91-92. Emergency Medical Technician Course. Instruction in emergency medical training which will prepare the student to qualify for certification as an emergency medical technician. Two-semester course; half course per semester. Prerequisite: CPR certification. One course. *Bowers or Duskey*

94. Care and Prevention of Athletic Injuries. Basic instruction in prevention, recognition, care, and rehabilitation of athletic-related injuries. Half course. *Staff*

96. Basketball. Development of individual and team skills. Half course. *Staff*

98. Frisbee. Study of basic throwing and catching skills, introduction to rules and tactics of ultimate frisbee, disc golf, freestyle moves, and individual event techniques. Half course. *Staff*

THEORY COURSES

495. First-Year Seminar. Topics vary each semester offered. One course. *Buehler*

120. Theory and Practice of Coaching. Fundamentals, strategies, and psychology of coaching. Emphasis on basketball, and track and field. Additional topics such as safety and liability, gender equity, the media, regulations, and ethics. One course. *Yakola*

150. Health, Fitness and Wellness. Relationships among health, wellness, exercise, nutrition and fitness. Scientific evidence pertaining to diet and nutrition, weight control, cardiovascular and strength fitness, stress management, tension control, and drugs and alcohol. Development of a personal lifetime fitness program. One course. *LeBar*

170. History and Issues of Sports. Sports from ancient to modern times with an emphasis on sports in America. Not open to students who have taken this course as Health, Physical Education, and Recreation 495. One course. *Buehler*

172. Administration in Sports Management. Philosophy, financial structure, administrative structure, fund-raising, NCAA legislation, personnel decision, and scheduling events. One course. *Alleva or Buehler*

174. Sports Marketing of Collegiate Athletic Events. Philosophy, marketing strategies, planning, and problem solving in promoting collegiate athletic events. One course. *Yakola*

COURSES CURRENTLY UNSCHEDULED

26. Scuba Diving

37. Advanced Racquetball

48. Men's Competitive Tennis

70. Folk Dancing

93. Orienteering

95. Wilderness Skills

110. Diet and Nutrition

112. Sexuality, Stress, and Substance Abuse: Choices, Risks, and Consequences

Health Policy

Assistant Research Professor Conover, *Director*

A certificate, but not a major, is available in this program.

The program speaks to the needs of students preparing for careers in health care policy, management, and the associated professions as the American health care industry enters into a period of rapid and profound change.

Courses in the health policy certificate program address three interrelated goals: (1) to investigate the machinery of contemporary health policy-making and to understand the broad political dynamics which have conditioned American health policy, past and present; (2) to familiarize students with the institutional and economic complexity of the American health care system through the study of the interaction between the key players in health care financing and organization—employers, private insurance carriers, government regulators, health care providers, and consumers; and, (3) to explore the cultural and ideological underpinnings of modern conceptions of health and the recurrent ethical dilemmas facing health care providers, patients, and policymakers.

The program draws upon established research programs relating to health services centered in economics, political science, public policy, and sociology but recognizes the inspired contributions to health care debates originating in the disciplines of anthropology, history, law, medical arts, philosophy, psychology, and religion.

PROGRAM REQUIREMENTS

The health policy certificate program is open to all undergraduates. Successful candidates must complete the prescribed combination of six courses: any one methodology course; two courses drawn from the core set of health policy course offerings; any two additional elective courses; and the capstone course. Appropriate courses may come from the list given below or may include other courses (new courses, special topics courses, independent study, and, under special circumstances, courses offered through the UNC School of Public Health*) as approved by the director.

For further details, contact the director at the Center for Health Policy, Research, and Education, Room 125 Old Chemistry Building, or consult the program website at <http://www.chpre.mc.duke.edu>

*Subject to regulations governing interinstitutional course registration. Note that the UNC School of Public Health semesters and daily schedules differ from those of Arts and Sciences at Duke.

Methods Courses (any one course)

Regularly Scheduled Courses

Economics 2D or Economics 52D. Competition, Monopoly, and Welfare. *Staff*

Economics 215S. Applied Cost Benefit Analysis. Prerequisite: Economics 149. *Staff*

Public Policy Studies 55D. Introduction to Policy Analysis. *Hamilton, Leitzel, Lipscomb, Mayer, or Miller*

Public Policy Studies 261. Evaluation of Public Expenditures. *Conrad*

Core Courses (any 2 courses)

Regularly Scheduled Courses

Economics 156. Health Economics. Prerequisite: Economics 149 or Public Policy Studies 110. *Sloan.*

Public Policy Studies 157. Health Policy. Consent of instructor required. (May not be counted as a core course by students who have taken Public Policy Studies 253.) *Henderson-James*

Sociology 171. Comparative Health Care Systems. (May not be counted toward certificate if Sociology 227C is counted.) *Staff*

Special Topics Courses, Offered Periodically

Public Policy Studies 264S. Research Seminar. Topics in Public Policy

264S.07. Getting Value for Money in Health Care: Rationing in Theory and Practice. *Lipscomb*

264S.53. Health Policy. Prevention and Management. *Whetten-Goldstein*

264S.70. Social Policy Implementation. *Lin*

264S.72. Managed Care. *Lin*

Sociology 227S. A-D. Proseminars in Medical Sociology. Selected topics in medical sociology. One course. *George, Gold, Jackson, Lin, or Thornton.*

A. Social Structure and Health

B. Social Behavior and Health

C. Organization and Financing of Health Care (May not be counted toward certificate if Sociology 227C is counted)

D. Special Topics in Medical Sociology (for example, social epidemiology, stress and coping, health and aging)

Elective Courses (any 2 courses)

Regularly Scheduled Courses

Cultural Anthropology 185S. The Canadian Health Care System. *Warren*

Economics 163. Economics of the Environment. Prerequisite: Economics 52. One course. *Smith*

Environment 270L. Resource and Environmental Economics. *Kramer*

Environment 272. Economic Analysis of Resource and Environmental Policies. *Staff*

History 189B. History of Public Health in America. *Humphreys*

History 190. The History of Women in Science and Medicine. *Green*

History 279, 280. Health, Healing, and History. *English*

Law 347. Health Care Law and Policy. Open to limited undergraduate enrollment with consent of instructor. * *Havighurst*

Philosophy 118. Philosophical Issues in Medical Ethics. Prerequisites: for freshman, previous philosophy course and consent of instructor. One course. *Brandon or Golding*

Political Science 107. Environmental Politics and Policies in the Industrial World. *McKean*

Political Science 147. Environmental Politics and Policies in the Developing World. *McKean or Miranda*

Political Science 148D. Environmental Politics Beyond Borders. *McKean*

Political Science 176A, B. Perspectives on Food and Hunger. *Johns*

Psychology 109A. Health Psychology. Not open to students who have taken Psychology 98. One course. *Anderson or Keefe*

Psychology 129. Psychology and the Law. Prerequisite: Psychology 99 or 108 or Psychology 116. *Fischer*

Public Policy Studies 149. United States Environmental Policy. Consent of instructor required. *Besse or Miranda*

Public Policy Studies 266. Comparative Social Policy. *Staff*

Public Policy Studies 274. Resource and Environmental Policy. Prerequisite: Environment 270L, Public Policy Studies 272, or consent of instructor. *Ascher*

Religion 182. Medicine and Religion in American Society. Not open to students who have taken

Religion 159. *Joyce*

*The Law School semesters and daily schedules differ from those of Arts and Sciences; interested students should check with the Law School to find exact course times.

Sociology 112. American Demographics. *Land, Myers, or Parnell*
Sociology 123. Social Aspects of Mental Illness. *George or Jackson*
Sociology 162. Health and Illness in Society. *Lin*
Sociology 163. Aging and Health. *George or Gold*

Capstone Course (required)

Public Policy Studies 255S. Health Policy Analysis. A group project designed for candidates seeking the undergraduate certificate. Consent of instructor required. *CHPRE faculty*

Hebrew

For courses in Hebrew, see Asian and African Languages and Literature.

Hindi

For courses in Hindi, see Asian and African Languages and Literature.

History (HST)

Professor Roland, *Chair*; Associate Professor Wigen, *Associate Chair*; Associate Professor Ewald, *Director of Undergraduate Studies*; Professors Cell, Chafe, Dirlik, Gaspar, Gavins, Goodwyn, Herrup, Hewitt, Keyssar, Koonz, Kuniholm, Lerner, Mauskopf, M. Miller, Petroski, Reddy, Richards, Shatzmiller, TePaske, Thompson, Witt, and Wood; Associate Professors English, French, Green, James, Nathans, Neuschel, Robisheaux, and Wigen; Assistant Professors Balliesen, Biddle, Hacohen, Humphreys, Mazumdar, Peyroux, and Thorne; Professors Emeriti Cahow, Colton, Davis, Durden, Ferguson, Franklin, Holley, Parker, Preston, Ropp, A. Scott, W. Scott, Watson, and Young; Adjunct Professor Roberts; Adjunct Associate Professors Pelech and Wilson; Adjunct Assistant Professors Litle and Y. Miller; Visiting Professor Mendelsohn; Visiting Assistant Professors El Hamel, Kaiwar, and Wall; Adjunct Lecturer Steen

A major or a minor is available in this department.

History courses offer students from all disciplines within the university an opportunity to investigate the past, gain perspective on the present, and improve their critical faculties. History provides an integrating principle for the entire learning process, and students of history gain a sense of human development, an understanding of fundamental and lasting social processes, and a feeling for human interrelatedness. History courses train the mind by improving skills in communicating thought and imagination.

INTRODUCTORY COURSES

Students may benefit from taking at least one introductory course before proceeding to advanced-level courses. Majors take two introductory courses in history (21, 22; 21D, 22D; 21S, 22S; 53, 54; 75, 76; 91, 92; 91D, 92D; 91S, 92S or 93S); History 94 and 98 may not be used to fulfill the introductory course requirement. Additional courses may be chosen from this group as electives or part of the departmental major.

20S. Studies in Special Topics. (CZ) Opportunities for freshmen to engage with a specific historical issue, with emphasis on student writing. Topics vary each semester offered. One course. *Staff*

21. Europe to the Eighteenth Century. (CZ) Development and world impact of European civilization, critical evaluation of historical interpretations, and investigation of history from primary sources. One course. *Staff*

21D. Europe to the Eighteenth Century. (CZ) A lecture-discussion version of History 21. One course. *Staff*

21S. Europe to the Eighteenth Century. (CZ) A seminar version of History 21. One course. *Staff*

22. Europe from the Eighteenth Century. (CZ) Development and world impact of European civilization, critical evaluation of historical interpretations, and investigation of history from primary sources. One course. *Staff*

22D. Europe from the Eighteenth Century. (CZ) A lecture-discussion version of History 22. One course. *Staff*

22S. Europe from the Eighteenth Century. (CZ) A seminar version of History 22. One course. *Staff*

29. Comparative Revolutions: France, 1789–Russia, 1917. (CZ) An introductory investigation into the general significance of political revolutions in the modern Western world. Focuses on two classic case studies: the French and Russian revolutions. Compares origins, development, and consequences of these influential historical transformations. Secondary comparisons with the American Revolution. One course. *M. Miller*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

53. Greek History. (CZ) See C-L: Classical Studies 53. One course. *Oates*

54. Roman History. (CZ) See C-L: Classical Studies 54. One course. *Boatwright or Oates*

55. History, Ideas, and Material Life. (CZ) The intellectual and religious life of the fourteenth century presented within the context of the economic, political, and social framework of this period of plague, demographic depression, and economic contraction. Open only to students in the FOCUS Program Medieval and Renaissance Studies. One course. *Witt*

57. Poverty and Sanctity in Medieval Society. (CZ) An examination of contemporary documents about heretics, saints, lepers, and moneylenders as well as the poverty that generated powerful movements for religious reform in the twelfth through the fourteenth centuries. Will consider both “heretical” and “orthodox” figures and beliefs as well as the conditions of profit making and poverty to gain a sense of the preoccupations that informed medieval Europeans’ notions of a rightly ordered society. Open only to students in the FOCUS Program and Medieval and Renaissance Studies. C-L: Medieval and Renaissance Studies. One course. *Peyroux*

75, 76. The Third World and the West. (CZ) Economic, social, political, and cultural relationships, 1500 to the present. C-L: African and African-American Studies 70, 71 and Comparative Area Studies. One course each. *Staff*

91. The Development of American Democracy to 1865. (CZ) The trends vital to an understanding of the United States today. The development of American democracy. Problems of foreign policy, the growth of capitalism, political practices, social reform, and conflicting ideals are considered in relation to this main theme. One course. *Staff*

91D. The Development of American Democracy to 1865. (CZ) A lecture-discussion version of History 91. One course. *Staff*

91S. The Development of American Democracy to 1865. (CZ) Seminar version of History 91. One course. *Staff*

92. America from 1877 to the Present. (CZ) A general introduction to American history from the end of Reconstruction to the present. The impact of industrialization, immigration, urbanization, and the rise of mass culture in the U.S.; the effect of depressions and wars on American society and politics; and the roots and results of reform movements ranging from

populism and progressivism to the civil rights, women's, and environmental movements. Ongoing debates about the government's proper economic and social role; changing views of ethnicity, race, and gender in America, and the determinants of United States foreign policy. One course. *Wall*

92D. America from 1877 to the Present. (CZ) A lecture-discussion version of History 92. One course. *Wall*

92S. America from 1877 to the Present. (CZ) Seminar version of History 92. One course. *Staff*

93S. Modern American History. (CZ) Emphasizes topics considered appropriate for the Twentieth-Century America Program (FOCUS). Open only to students in that program. One course. *Gaspar*

94. The Age of Augustus. (CZ) Does not count for introductory course requirements. See C-L: Classical Studies 70. One course. *Staff*

98. Introduction to Canada. (SS) Does not count for introductory course requirements. See C-L: Canadian Studies 98; also C-L: Comparative Area Studies, Economics 98, Political Science 98, and Sociology 98. One course. *Thompson*

COURSES TAUGHT IN DUKE STUDY ABROAD PROGRAMS

Courses numbered 100 with a letter suffix (100A, 100B . . . 100Z) are lecture courses taught in Duke-administered study-abroad programs, for example, in Germany, Italy, France, China. These courses provide the same credit and fulfill the same curriculum requirements as any 100-level lecture course in the history department.

100A. History of Modern Spain. (CZ) (Taught in fall program in Spain.) Not open to students who have taken History 101L. One course. *Staff*

100B. History of Renaissance Italy. (CZ) (Taught in Italy.) Not open to students who have taken History 182. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Witt or staff*

100E. Indian History and the Present. (CZ) Overview of medieval and modern Indian history. Emphasis on the creation of a new Indian society emerging from the colonial past. (Taught in Delhi.) One course. *Kumar*

100J. Foundations of Chinese Civilization. (CZ) (Taught in China.) Not open to students who have taken History 163. See C-L: Cultural Anthropology 163; also C-L: Comparative Area Studies. One course. *Staff*

100K. History of Spain from Late Medieval Times to the Present. (CZ) (Taught in Spain.) Not open to students who have taken History 173. One course. *Staff*

100L. German History from 1870 to the Present. (CZ, FL) Analysis of the major historical, social, economic, and cultural developments of German history, from the founding of the German Reich through the post-World War II period. (Taught in Germany by a faculty member of the Free University of Berlin.) Not open to students who have taken History 188. C-L: Comparative Area Studies. One course. *Staff*

100M, S. Spanish Colonialism in Latin America from the Sixteenth to the Eighteenth Century. (CZ, FL) (Taught in Spanish in the Duke in the Andes Program.) One course. *Staff*

100N. Australian Environmental History. (CZ) (Taught in Australia). One course. *Tyrell*

100U. Bolivian Culture. (CZ, FL) (Taught in Bolivia.) See C-L: Cultural Anthropology 199C. One course. *Staff*

100V, S. The Age of Transition: Fin de Siècle and Edwardian Britain. (SS) Analysis of late nineteenth- and early twentieth-century British history. Emphasis on the transition to mass media politics, the emergence of British socialism, female emancipation, urbanization, forms of British imperialism, the decline of the British economy, the "New Liberalism," and the rise of Irish nationalism. (Taught in Oxford.) Two courses. *Staff*

100W. History of Spain I. (CZ) Through the seventeenth century. (Taught in Spain.) One course. *Maldonado*

100X. History of Spain II. (CZ) Eighteenth to the twentieth century. (Taught in Spain.) One course. *Maldonado*

100Y, S. Modern British History: The Political Economy of Decline (1880-1980). (SS) (Taught in Oxford.) Two courses. *Staff*

UNDERGRADUATE COLLOQUIA

101C. Terrorism, 1848-1968. (CZ) A comparative analysis of the origins and development of modern terrorism in the West (Europe, Russia, and the United States). C-L: Comparative Area Studies. One course. *M. Miller*

101E. Nationalism and Exile. (CZ) The dilemmas confronting Russian and European exiles in the nineteenth and twentieth centuries in the context of nation-state identities. Focuses on political and literary exiles forced from their native countries. Central to the study is the role of the modern nation-state, from whose boundaries the exiles were expelled. One course. *M. Miller*

101G, 102G. Introduction to Islamic Civilization. (CZ) Not open to students who have taken Religion 162, 163. See C-L: Religion 146, 147; also C-L: Comparative Area Studies; Cultural Anthropology 147, 148; and Medieval and Renaissance Studies. One course each. *Cornell, Lawrence, and staff*

101K. Topics in Chinese Civilization. (CZ) C-L: Comparative Area Studies. One course. *Dirlik*

101M. Asian-Pacific Region in Historical Perspective. (CZ) The emergence of the Asian-Pacific region as a recognizable structure from the nineteenth century onward. Pre-modern history will be dealt with only to the extent that it is necessary for understanding later developments. The role played by the flow of commodities, people, ideas, and other cultural artifacts. C-L: Comparative Area Studies. One course. *Dirlik*

101N. The Social History of Alcohol. (CZ) The history of the consumption of alcoholic beverages as an aspect of the social history of Western Europe and the United States. One course. *Roberts*

COURSES ON SPECIAL TOPICS

Lecture Courses

Courses numbered 103 or 104 with a letter suffix (103A, 104A; 103B, 104B . . . 103Z, 104Z) are lecture courses on special topics, concerning subject matter which the department does not endeavor to cover on a routine basis. Some will be offered only once and therefore will not appear in the bulletin. If such a course is likely to be offered more than once, it will be listed in the bulletin.

103, 104. Lectures in Special Topics. (CZ) Individual courses in this series may be taught more than once or on a one-time basis only. One course each. *Staff*

Seminar Courses

105S, 106S. Seminars in Selected Topics. (CZ) One course each. *Staff*

UNDERGRADUATE INTERMEDIATE-LEVEL COURSES

107A. Tudor/Stuart Britain. (CZ) C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Herrup*

107B. Modern Britain. (CZ) C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Thorne*

108C. Canadian-American Relations. (CZ) The Canadian-United States relationship in its diplomatic, military, economic, and cultural aspects from the American Revolution to the present, with emphasis on the twentieth century. C-L: Canadian Studies and Comparative Area Studies. One course. *Thompson*

108D. Across the Great Divides: The United States and Canadian Wests in the Nineteenth and Twentieth Centuries. (CZ) An examination of the United States and Canadian westward movements, considering in comparative contexts: the dispossession of Native Peoples; federal government expansionist policies; the ranching, farming, and resource-extracting frontiers; immigration and ethnic diversity; women's experiences of the West; the transition of territories to states and provinces; political insurgencies. C-L: Canadian Studies. One course. *Thompson*

108E, S. The Canadian Health Care System. (SS) See C-L: Canadian Studies 185S; also C-L: Comparative Area Studies, Cultural Anthropology 185S, Economics 185S, Political Science 185S, Public Policy Studies 187S, and Sociology 185S. One course. *Warren or staff*

108F. Introduction to North America. (CZ, SS) See C-L: North American Studies 110; also C-L: Cultural Anthropology 129, Economics 115, Political Science 119, Public Policy Studies 115, Romance Studies 125, and Sociology 109. One course. *Shanahan*

109. Contemporary Global Issues. (SS) See C-L: Comparative Area Studies 109; also C-L: Cultural Anthropology 109, Political Science 160, and Sociology 175. One course. *Staff*

110. History of Eastern Europe in Modern Times. (CZ) The development of the nations and nationalities of Eastern Europe since the early eighteenth century. C-L: Comparative Area Studies. One course. *Lerner*

111A. Early America to 1760. (CZ) Pre-Columbian explorations, European invasion of North America, the evolution of race slavery, and the responses of the native American peoples. Not open to students who have taken the former History 111. One course. *Wood*

111B. Era of the American Revolution, 1760-1815. (CZ) Origins, evolution, and consequences. Attention to economic, social, and geographical questions, as well as military and political. Not open to students who have taken the former History 112. One course. *Wood*

111C. The United States from the 1890s to 1940. (SS) Economic, social, and political history of the United States from the Populist revolt to the end of the New Deal. Not open to students who have taken the former History 113. One course. *Keyssar*

112A, 112B. The World in the Twentieth Century. (CZ) Imperialism and decolonization, war, revolution, international capitalism and depression, science and technology. 112A: 1900 to 1945; 112B: 1945 to the present. One course each. *Cell*

113B. Europe's Colonial Encounter, 1492-1992. (CZ) Surveys the impact of colonial expansion on European economic development, political culture, and popular identity from the "age of discovery" through the present. C-L: African and African-American Studies 113B. One course. *Thorne*

114B. Immigration, Migration, and Mobility of Labor: United States and the World. (CZ) The major themes of migration, its impact on the country of departure as well as of destination, factors shaping the paths of migration, the relative openness and receptivity of countries to immigrants. Within a global framework, focus on migration and immigration to the United States, from the Irish in the 1840s to Hispanic migrants of recent decades. Case studies of migration to Latin America, migration from southern to northern Europe, and migratory movements within Asia, revealing similarities and differences in migration patterns that take place in diverse cultures and at different historical epochs. One course. *Keyssar*

115A. History of Africa: From Antiquity to Early Modern Times. (CZ) Beginning with civilizations known from archaeological records to the early modern era. Topics include African ecologies and ecological adaptations; Egyptian civilization; dynamics of agrarian and pastoral communities; state formation; long distance trade; Islam; contacts with Europeans. Methodologies and sources for reconstructing Africa's past. Not open to students who have taken the former History 115. C-L: African and African-American Studies 115A, Comparative Area Studies, and Women's Studies. One course. *El Hamel or Ewald*

115B. History of Africa: From Early Modern Times to Independence. (CZ) Beginning with the dynamics of African societies before the onset of European engagement in the continent and covering the impact of the Atlantic economy; expansion of long distance maritime and overland trade; Islam and Islamic reform; state formation; responses to colonialism; independence movements; the postcolonial state. African novels, autobiographies, and films, as well as scholarship by Africans. Not open to students who have taken the former History 115. C-L: African and African-American Studies 115B, Comparative Area Studies, and Women's Studies. One course. *El Hamel or Ewald*

116. Aspects of Medieval Culture. (CZ) Not open to students who have taken Art 139. See C-L: Medieval and Renaissance Studies 114; also C-L: Art History 139 and Classical Studies 139. One course. *Rasmussen, Solterer, or Witt*

117. Early Modern Europe. (CZ) The economic, social, and political history of early modern Europe. C-L: Comparative Area Studies, Medieval and Renaissance Studies, and Women's Studies. One course. *Neuschel*

118A. American National Security Policy from 1945 to 1975. (CZ) Evolution of American defense policy, nuclear and conventional, within the political context of the Cold War. Not open to students who have taken the former History 157, American National Security Policy from 1945 to 1975. One course. *Biddle*

118B. Warfare in the Twentieth Century. (CZ) Key conflicts of this century evaluated in terms of causes and consequences (political, social, and economic), and strategy and technology (war plans, weapons systems, and doctrine). One course. *Biddle*

118C. History of the World Wars. (CZ) An examination of the origins, course, and consequences of the world wars of this century. One course. *Biddle*

119A, 119B. Native American History. (CZ) A survey of conditions and events from precolonial times to the present. One course each. *Wood*

120. History of Socialism and Communism. (CZ) The origins and development of socialist and communist movements from pre-Marxian times to the present. Not open to students who have taken History 239. C-L: Comparative Area Studies. One course. *Lerner*

121A. America in International Affairs, 1607-1861. (CZ) The diplomacy of the colonial, revolutionary, and early national periods. One course. *Staff*

121B. The United States as a World Power: 1861-1941. (CZ) American diplomacy from the beginning of the Civil War to entry into World War II. One course. *Staff*

121C. American Diplomacy since 1941. (CZ) Not open to students who have taken the former History 122, American Diplomacy. One course. *Staff*

123S. Madness and Society in Historical Perspective. (SS) Mental illness and psychiatric treatment from antiquity to the present with special concentration on the nineteenth and twentieth centuries in Europe, America, and Russia. C-L: Comparative Area Studies. One course. *M. Miller*

124S. Slave Society in Colonial Anglo-America: The West Indies, South Carolina, and Virginia. (CZ) The development of slave-based societies and the production of staple crops for export. C-L: African and African-American Studies 124S and Comparative Area Studies. One course. *Gaspar*

126S. Women in the Ancient World. (CZ) See C-L: Classical Studies 104S; also C-L: Women's Studies. One course. *Boatwright*

127A. The Caribbean, 1492-1700. (CZ) The Caribbean region from the arrival of Columbus (1492) to the emergence of sugar and slavery as powerful shapers of society and culture, by 1700. C-L: African and African-American Studies 127A. One course. *Gaspar*

127B. The Caribbean in the Eighteenth Century. (CZ) The development of Caribbean society and economy in the contexts of slavery, empire, international rivalry, and democratic revolution. Not open to students who have taken History 127. C-L: African and African-American Studies 127B. One course. *Gaspar*

129A. Experiment in Republicanism: The United States, 1787-1860. (CZ) Not open to students who have taken the former History 129. One course. *Nathans*

129B. From Victorian to Corporate America, 1820-1900. (CZ) Not open to students who have taken History 130. One course. *Nathans*

130A. Modern Ireland. (CZ) A comparison of Irish history with British imperial history. Survey of Irish history from the Elizabethan conquest to the present. One course. *Cell*

131B. The Spanish Caribbean. (CZ) Cuba, the Dominican Republic, and Puerto Rico from the encounter in 1492 to the present with special emphasis on the early days of colonization, intercolonial rivalry, comparative economic and social developments, and the Cuban revolution. C-L: Comparative Area Studies. One course. *TePaske*

132. Modern World Environmental History, 1500 to the Present. (CZ) Environmental effect of global economic growth. Impacts of agriculture, forestry, mining, and industry on the biosphere. Use of freshwater resources. Effects of modern transportation and urbanization. The world environmental movement. C-L: Comparative Area Studies. One course. *Richards*

133A. The Birth of Europe: Society and Culture, 200-900. (CZ) Europe in the transition from the world of late antiquity to the varied civilizations of the Middle Ages; social, cultural, and political frameworks in the time of the Emperor Constantine and St. Augustine. The barbarian invasion: practices and communities. The small-scale politics of dark-age Ireland, Spain, and the growth, consolidation, and demise of the Carolingian empire. Not open to students who have taken History 133. C-L: Medieval and Renaissance Studies. One course. *Peyroux*

133B. Medieval Europe, 1000-1450. (CZ) Western Europe in the High Middle Ages; the agricultural revolution, the re-emergence of city civilization, and the strengthening central governments and bureaucracies. Not open to students who have taken History 133. C-L: Medieval and Renaissance Studies. One course. *Shatzmiller*

133C. British Isles in the Middle Ages. (CZ) From the fifth through the fourteenth centuries. Not open to students who have taken History 134. C-L: Medieval and Renaissance Studies. One course. *Peyroux*

134A. History of Jews in the Middle Ages. (CZ) Focuses on history of Jews in western Europe in the late middle ages; Jewish numerical strength, contributions to the economy, self government, religious and intellectual preoccupations. C-L: Medieval and Renaissance Studies. One course. *Shatzmiller*

135B. Germany from 1871 to 1933. (CZ) Militarism, socialism, and feminism following the first unification; Weimar democracy in the aftermath of defeat; the popularity of Hitler in the context of the Depression. C-L: Comparative Area Studies. One course. *Koonz*

135C. Germany from 1933 to 1990. (CZ) The creation of the Nazi state, its propaganda, economic recovery schemes, and bio-political social organization. The war years, from the standpoint of the victims and perpetrators, to be examined through memoirs and psychological studies of the "holocaust kingdom." The postwar period: women's role in rebuilding Germany, de-Nazification and the Cold War in the East and West, and (based on journalists' accounts) "post-wall" Germany. The shape of public memory in "Bitburg history" and monuments to the victims of Nazi extermination. One course. *Koonz*

136A. Introduction to Contemporary Latin American Reality. (CZ) The complexity and diversity of factors which help to define the daily experience of Latin American reality for contemporary Latin Americans. Through cultural, academic, and government documents, issues ranging from ecology and energy policy in Brazil to human rights abuses and the experience of women in modern Latin America will be studied. Not open to students who have taken History 136. One course. *James*

136B. Biography and Politics in Latin America. (CZ) Key individuals who have shaped Latin American society and politics from Hernán Cortés to Fidel Castro. One course. *French*

136C. Nineteenth-Century Latin America: Building Postcolonial Nations. (CZ, SS) The period from the Wars of Independence to the First World War. Explores how nations and national identities were constructed in Latin America; focus on the importance of race, gender, and ethnicity. Conflicts between church and state, struggles over freedom and citizenship, and economic dependency and development. C-L: Comparative Area Studies. One course. *Staff*

137. Comparative Approaches to Global Issues. (SS) Not open to students who have taken Religion 121. See C-L: Comparative Area Studies 125; also C-L: Cultural Anthropology 125, Political Science 125, Religion 183, and Sociology 125. One course. *Staff*

138. Renaissance and Reformation Germany. (CZ) The interplay of social, economic, and political developments in Central Europe from the eve of the Reformation to the end of the Thirty Years' War, with particular attention to the links between religion, gender, and the social order. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Robisheaux*

139A. Radical Movements in Modern Asia. (CZ) The emergence, interactions, and the nature of radical movements in Asian societies. Emphasis on identifying the character of Asian radical discourses as expressions of third world responses to modernity. One course. *Dirlik*

139B. Modern South Asia. (CZ) South Asian history from the rebellion of 1857 to independence and partition in 1947. Topics include the impact of colonial rule on the economy; politics and social formation of the subcontinent; the rise of nationalism; religion and politics; and the position of women. One course. *Kaiwar*

140S. Economics of Slavery in the American South. (SS) Prerequisite: Economics 149. See C-L: Economics 161S; also C-L: African and African-American Studies 161S. One course. *Staff*

141A. Crossroads of Eurasia: The History of Turkey. (CZ) A study of the land which became modern Turkey as a crossroads of civilization, from ancient times to the present day. One course. *Neuschel*

142A. China: Roots of Revolution. (CZ) A survey of modern Chinese history with special emphasis on the nineteenth and twentieth centuries. Not open to students who have taken History 142. C-L: Comparative Area Studies. One course. *Dirlik or Mazumdar*

142B. China since 1949: The People's Republic. (CZ) The Chinese path to communism and the communist transformation of Chinese society. Not open to students who have taken History 139. C-L: Comparative Area Studies. One course. *Dirlik or Mazumdar*

142C. Chinese Food in History. (CZ) Food and food crops in historical perspective. Using literary sources and art, the course reconstructs the culture of food. One course. *Mazumdar*

142E. Modern China in Film and Literature. (CZ, SS) Focus on the contributions to historical understanding of nonhistorical texts. Differences in Chinese and non-Chinese representations; the effect of different media in representations; study of film versions of literary works. One course. *Dirlik*

143A. Ancient and Early Modern Japan. (CZ) Japan from earliest settlement to 1868; the Heian Court, rise of the samurai, feudal society and culture, the Tokugawa age, and the Meiji Restoration. Not open to students who have taken the former History 143. C-L: Comparative Area Studies. One course. *Wigen*

143B. The Emergence of Modern Japan. (CZ) Japan from Meiji to microchips. The Meiji settlement, industrialization and urban growth; political parties, social movements, and foreign policy in the imperial era; World War II and the American occupation; economic recovery. Not open to students who have taken the former History 144. C-L: Comparative Area Studies. One course. *Wigen*

144A. The Crusades to the Holy Land. (CZ) The crusades to the Holy Land and other manifestations of European expansionism, for example, the reconquest of Spain and the foundation of a Norman Kingdom in Sicily. One course. *Shatzmiller*

145A, 145B. African-American History. (CZ) The black experience in America from slavery to the present. C-L: African and African-American Studies 145A, 145B and Comparative Area Studies. One course each. *Gavins*

146S. Introduction to Russian Civilization. (CZ) See C-L: Russian 190S; also C-L: Comparative Area Studies. One course. *Pelech*

147A. The Jews in Eastern Europe. (CZ) Jewish social, cultural, and political history in the lands of Eastern Europe (Russia, Poland, Romania, Hungary, Czechoslovakia) in the nineteenth and twentieth centuries. Emphasis on relations between Jews and non-Jews and on the Jewish efforts to solve the "Jewish question." Special attention to Poland and the Soviet Union in the interwar period. One course. *Mendelsohn*

147B. Modern Jewish History: Europe and the United States. (CZ) A survey of Jewish history in the nineteenth and twentieth centuries including topics such as: "modernization" of Jewish politics (for example, Zionism, socialism, integration). Special emphasis on mass migration of East European Jews to America and the development of the American Jewish community from the late nineteenth century onwards. One course. *Mendelsohn*

147C. Nationalism, Socialism, and the Jews. (CZ) Survey of modern Jewish history in Europe and America, emphasizing the impact of two of the most powerful ideologies and political movements of the modern era—nationalism and socialism—on the Jewish minority. Covers late nineteenth century to 1939. One course. *Mendelsohn*

148. Aspects of Renaissance Culture. (CZ) See C-L: Medieval and Renaissance Studies 115; also C-L: Art History 149 and Italian 125. One course. *Rasmussen, Rice, Van Miegroet, and Witt*

149. World Military History. (CZ) Comparative study of war as a social institution in different times and cultures. Topics include the origins of war and war in ancient China, classical Greece, the Middle Ages, early modern Europe, colonial America, nineteenth-century Japan, the cold war, and Vietnam. One course. *Roland*

150A. Documentary Film History. (AL, CZ) The development of the nonfiction film from a historical perspective. Beginning in the silent period with the ethnographic films of Robert Flaherty; in the sound period, the work of John Grierson. Various schools such as cinema verite and direct cinema in the 1950s up to the present revival and rehabilitation of documentary. Technological changes and the use of documentary as a political organizing tool. C-L: Film and Video, Literature 117, and Political Science 198. One course. *Gaines, Paletz, and Wood*

150B, S. American Communities: A Documentary Video Approach. (AL, SS) Prerequisites: English 101A and any one of the following: Film and Video 100S, 101S, or 104S. See C-L: Film and Video 105S; also C-L: Cultural Anthropology 134S, Political Science 156S, and Public Policy Studies 105S. One course. *Staff*

151A. The Intellectual Life of Europe, 1250-1600. (CZ) Not open to students who have taken History 104. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Witt*

151E. European Intellectual History, 1848-1918. (CZ) Contextual study of some major works in European social and political thought from the revolution of 1848 to the First World War. Readings in Mill, Taylor, Marx, Nietzsche, Freud, Durkheim, Weber, Lenin, Kollantai, and Gramsci, as well as in secondary interpretations and historical works. One course. *Hacohen*

151F. European Intellectual History, 1918-1968. (CZ) Contextual study of some major works in European social and political thought from the First World War to the Student Revolution. Readings in Schmitt, Arendt, Heidegger, Beauvoir, Wittgenstein, Berlin, Fanon, Foucault, and Habermas. One course. *Hacohen*

152. The Modern Middle East. (CZ) The historical development of the Middle East in the nineteenth and twentieth centuries. The emergence of nation-states in the region following World War I. C-L: Comparative Area Studies. One course. *Y. Miller*

153. The Insurgent South. (CZ) One course. *Goodwyn*

154A. Society and the State in France, 1700 to the Present. (CZ) Examines French social history in relation to the growth of the state from the old regime to the present day. Attention given to those turning points such as the revolutions of 1789 and 1848 or the cataclysm of World War I, in which society imposed a new shape on the state and, in turn, was transformed by it. Gender, the family, economic development, leisure, and literature. One course. *Reddy*

154B, S. Upheavals That Made Modern France. (CZ, FL) A study of the critical and violent moments in French history that redefined the modern French nation and society: the French Revolution, the revolution of 1848, and the two world wars. Taught in French. C-L: French 154S. One course. *Orr and Reddy*

154D. The French Revolution at 200 Years. (CZ) The uncertainties that still surround historical interpretations of this seminal event. One course. *Reddy and Stewart*

156A. The Reformation of the Sixteenth Century. (CZ) Not open to students who have taken Religion 167. See C-L: Religion 158; also C-L: Medieval and Renaissance Studies. One course. *Hillerbrand*

156B. History of the Christian Church. (CZ) See C-L: Religion 120. One course. *Hillerbrand*

157A. Rise of Modern Science: Early Science through Newton. (CZ) The development of science and medicine with attention to cultural and social influences upon science. Not open to students who have taken the former History 118. One course. *Mauskopf*

157B. Rise of Modern Science: Eighteenth to the Twentieth Century. (CZ) See History 157A. Not open to students who have taken the former History 118. One course. *Mauskopf*

157C. Rise of Modern Science: Twentieth Century. (CZ) See History 157A. Not open to students who have taken the former History 118. One course. *Mauskopf*

158A. New Perspectives on the Atlantic World. (CZ) Reorients the histories of four continents. An exploration of how an Atlantic world arose because of the interactions among Africa, North America, South America, and Europe. How this Atlantic world originated in the fifteenth century; how people emigrated, by force or free will, from one continent to another (and often back again); how plants, animals, trade goods, and diseases crossed the ocean; how ideas—especially revolutionary ideas—arose from intercontinental contact and spread throughout the Atlantic world. Concludes that people of each of the Atlantic continents possess a heritage including the three other continents, and that this heritage was ocean-borne. C-L: African and African-American Studies 158A. One course. *Ewald*

159S. The Palestine Problem and United States Public Policy. (CZ) See C-L: Public Policy Studies 175S; also C-L: Comparative Area Studies. One course. *Kuniholm*

160. The United States from the New Deal to the Present. (CZ) C-L: Women's Studies. One course. *Chafe*

161. History of Modern Russia. (CZ) Following a brief introduction to the medieval origins of the Imperial Russian state, the course will concentrate on the period between the reign of Catherine the Great (1762-1796) and the death of Lenin in 1924. Emphasis on state authority, ruling elites, and the formation of the opposition revolutionary movement leading to the Bolshevik seizure of power in 1917. Not open to students who have taken both History 161A and 161B. C-L: Comparative Area Studies. One course. *M. Miller*

162A. Diplomatic Relations in the Western Hemisphere. (CZ) Relations between Latin America and the United States from 1815 through the 1960s with special emphasis on Mexico, Central America, and the Caribbean. The eras of Manifest Destiny, Dollar Diplomacy, the Cold War, and the Cuban Revolution as seen through the biography and discourse of participants and historians. One course. *French*

163A. The Coming of the United States' Civil War, 1820-1860. (CZ) Slavery and the gradual collapse of the early national consensus concerning it. The rise of sectionalism as reflected mainly in the nation's politics. One course. *Durden*

163B. The United States' Civil War and its Aftermath, 1861-1900. (CZ) Emphasis on the political and social aspects of the war; only slight treatment of battles. Political, racial, and economic themes of the Reconstruction and Populist eras. One course. *Durden*

163C. The American Civil War. (CZ) One course. *Goodwyn*

164. India, Pakistan, and Bangladesh: 1750 to the Present. (CZ) Social and economic impact of Western rule, development of nationalism and independence. C-L: Comparative Area Studies. One course. *Richards*

165. History of the Working Class in the United States. (CZ) A social history of the working class, as well as a political history of labor, from the early nineteenth century to the present. Not open to students who have taken History 106. C-L: African and African-American Studies 165. One course. *Keyssar*

168S. The Atlantic Slave Trade. (CZ) The development of the slave trade from the fifteenth century to its abolition in the nineteenth century; organization and mechanics, impact on Europe, Africa, and the Americas. C-L: African and African-American Studies 168S and Comparative Area Studies. One course. *Gaspar*

169A, 169B. The Social History of American Women. (CZ) C-L: Women's Studies. One course each. *Hewitt*

170C. Afro-Brazilian Culture and History. (CZ) Slavery and the post-emancipation trajectory of Afro-Brazilians in a racist society which officially proclaims itself a "racial democracy." Comparisons drawn with the Afro-American experience elsewhere in Latin America and the United States. C-L: African and African-American Studies 170. One course. *French*

171A. History of Women in Early Modern Europe. (CZ) Women in Europe from medieval times to 1800 with attention to economic, social, and intellectual experience. C-L: Comparative Area Studies and Women's Studies. One course. *Neuschel*

172B. China and the West. (CZ) Survey course with overview of the pre-nineteenth-century Western contacts with China (for example, the French Physiocrats and European idealization of China, early American and English trade). Focus on nineteenth-century topics such as the Opium Wars, British and French imperialism, the efforts to import western technology into China by Westerners, and twentieth-century matters such as the impact of the Russian Revolution and Euro-American foreign policy towards China, concluding with Nixon's visit to China in 1972 and the re-establishment of Sino-American foreign relations. One course. *Mazumdar*

172C. China from Antiquity to 1400. (CZ) Beginning with the early neolithic cultures, focus on the evolution of Han civilization, the formation of the imperial state system in China, ecological adaptations and foundations of the agrarian economy, the coming of Buddhism to China, and China's contacts with other peoples and regions of Asia up to A.D. 1400. One course. *Mazumdar*

173. History of Spain from Late Medieval Times to the Present. (CZ) Development of the Spanish nation-state from the times of Ferdinand and Isabella, Charles V, and Philip II to the Franco regime and its aftermath. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *TéPaske*

174B. Modern Latin America. (CZ) A survey of nineteenth- and twentieth-century economic, social, and cultural change. Not open to students who have taken History 177. C-L: Comparative Area Studies. One course. *Staff*

175S. The Southern Plantation as Historical Laboratory: Odyssey in Black and White, 1770-1970. (CZ) Readings and discussion on the plantation as a microcosm of Southern social history since 1770, emphasizing the parallel evolution of black and white communities, families, economies, cultures, perceptions, and power struggles. C-L: African and African-American Studies 175S. One course. *Nathans*

177A. American Constitutional Development I. (SS) May not be taken by students who have taken Political Science 118. See C-L: Political Science 177. One course. *Fish*

178A. Science and Technology in the Ancient World. (CZ) See C-L: Classical Studies 101. One course. *Rigsby*

179. History of South Africa, 1600-1960. (CZ) The relationships among South Africa's racial and cultural communities, with special attention to economic and political developments within each community and the impact of those developments on their mutual interactions. C-L: African and African-American Studies 179 and Comparative Area Studies. One course. *Ewald*

180. The Soviet Experience. (CZ) A survey of the history of Russia and the Soviet Union from the eve of the Revolution to the present day with particular emphasis on political, social, and cultural change and continuity. Not open to students who have had History 262. C-L: Comparative Area Studies. One course. *Lerner*

182C. History of Greek and Roman Civil Law. (CZ) Not open to students who have taken History 103. See C-L: Classical Studies 102. One course. *Oates*

183S. Canada from the French Settlement. (CZ) Problems in the development of Canada and its provinces. C-L: Canadian Studies and Comparative Area Studies. One course. *Thompson*

184S. Canadian Issues. (SS) Prerequisite: Canadian Studies 98 or consent of instructor. See C-L: Canadian Studies 184S; also C-L: Comparative Area Studies, Cultural Anthropology 184S, Economics 184S, Political Science 184S, and Sociology 184S. One course. *Staff*

185A. Socialist Realism: Soviet Literature of the 1930s and 1940s. (AL) See C-L: Russian 182; also C-L: Comparative Area Studies. One course. *Lahusen*

186. Marxism and Society. (SS) See C-L: Cultural Anthropology 139; also C-L: Comparative Area Studies, Education 139, Literature 181, and Sociology 139. One course. *Staff*

188A. Genocide in the Twentieth Century. (CZ) Focus on four cases in which soldiers have launched murderous attacks against civilians: Turks against Armenians, Nazis against Jews and other racial enemies, Khmer Rouge against their Cambodian enemies, and "ethnic cleansing" in Yugoslavia. Examines responsibility of both perpetrators and bystanders. One course. *Koonz*

189B. History of Public Health in America. (CZ) The role of epidemic diseases such as smallpox, cholera, yellow fever, tuberculosis, and polio in shaping public health policy in the United States from the colonial era to World War II. One course. *Humphreys*

190. The History of Women in Science and Medicine. (CZ) The history of scientific and medical theories about women and an analysis of women as participants in the evolution of science and medicine. One course. *Green*

193, 194. Introduction to the Civilizations of Southern Asia. (CZ) Not open to students who have taken Religion 160, 161. See C-L: Asian and African Languages and Literature 160, 161; also C-L: Comparative Area Studies; Cultural Anthropology 101, 102; and Religion 144, 145. One course each. *Khanna or staff*

SMALL GROUP LEARNING EXPERIENCES

Independent Study

Independent study is usually undertaken by students concurrently with a course or with an instructor with whom they have had a course. Students should submit to the

instructor in writing a detailed description of intent in the study. Both the instructor's consent and approval of the director of undergraduate studies are required for enrollment.

191, 192. Independent Study. One course each. *Staff*

Undergraduate Seminars

See also History 21S, 22S, 49S, 91S, 92S, 93S, 105S, 106S, 123S, 124S, 140S, 141S, 154B,S, 159S, 167S, 168S, 175S, 176S, 183S, 184S.

195S, 196S. Junior-Senior Seminars in Special Topics. (CZ) Opportunities for juniors and seniors to research and write about a specific historical question. Topics are numerous and vary each semester. Most seminars are offered for one semester and carry one course credit; some seminars are offered for year-long study and carry two course credits. If students wish to enroll in only one semester of a year-long seminar, they must obtain permission from the instructor. Both history majors and nonmajors may enroll in the seminars during their junior or senior years. Students are urged to enroll in their junior year if they expect to apply for the Senior Honors Seminar (History 197S-198S) or to practice-teach in their senior year. One course each. *Staff*

Honors Seminars

197S-198S. Senior Honors Seminar. Designed to introduce qualified students to advanced methods of historical research and writing and to the appraisal of critical historical issues. Open only to seniors, but not restricted to candidates for graduation with distinction. This course, when taken by a history major, is accompanied by either a year-long 195S-196S seminar or two courses at the 200 level. In unusual circumstances, with consent of the instructor, coordinator of the senior honors seminar, and director of undergraduate studies, 191-192 may replace the two courses of 195S-196S seminars or the two courses at the 200 level. Two courses. *Staff*

ADVANCED COURSES (FOR SENIORS AND GRADUATES)

Students may receive credit for either semester of a hyphenated course at the 200 level without taking the other semester if they obtain written consent from the instructor.

201S. The Russian Intelligentsia and the Origins of the Revolution. (CZ) Origin and dynamics of the Russian revolutionary movement, the intelligentsia, and the emergence of the labor movement. C-L: Comparative Area Studies. One course. *M. Miller*

202S. The Russian Revolution. (CZ) An analysis of the Bolshevik seizure of power in 1917 and the establishment of a revolutionary society and state during the 1920s. C-L: Comparative Area Studies. One course. *M. Miller*

203. Topics in Modern World Environmental History. (CZ) Human effects upon the natural environment; case studies and a synthetic global perspective. One course. *Richards*

206. Origins of Afro-America. (CZ) A comparative and interdisciplinary approach to early history of Africans in the Western hemisphere. Uses anthropological, linguistic, and archeological literature in addition to historical studies to examine the origins of the diverse African-American cultures of the Americas. C-L: African and African-American Studies 206. One course. *Staff*

209S. Race, Class, and Gender in Modern British History. (CZ) The intersection between gender, race, and class identities in British history since the eighteenth century. The parallels and overlaps as well as the disjunctures and distinctions between these different modes of power in a period of tremendous economic, social, and political change resulting from industrialization and imperial expansion. Questions and issues include the impact of industrialization on gender as well as class consciousness, the role of women, the middle

classes and the working classes in the campaign against slavery, British workers' reactions to the "scramble" for colonies, the attitudes and activities of British women in the empire, and sexuality and the evolution of racist discourse. C-L: African and African-American Studies 209S and Study of Sexualities. One course. *Thorne*

210S. Anthropology and History. (SS) Prerequisite: major in history, one of the social sciences, or comparative area studies; or graduate standing. See C-L: Cultural Anthropology 207S. One course. *Reddy*

211A. History of Medicine in the Southern United States. (CZ) The social history of disease and medical practice in the southern United States from the colonial era to World War II. Topics will include the impact of disease on the region's settlement and economy, slave health, the role of "alternate practitioners," and the growing federal presence in the post-Reconstruction South. One course. *Humphreys*

213S. Early Modern France. (CZ) Intensive survey of French history from approximately 1500-1750, including political, social, religious, and economic history. Focuses on interpretive trends in historiography and links between cultural history and literature. One course. *Neuschel*

214. Class, Public Opinion, and the French Revolution. (CZ) The current state of the ongoing controversies over the origins and character of the first modern social revolution. One course. *Reddy*

216S. United States Diplomacy, 1890-1945. (CZ) C-L: Canadian Studies. One course. *Staff*

221. Special Topics in the History of Europe, 1200-1700. (CZ) Investigation of selected aspects of the economic, social, and cultural history of premodern Europe. Topics have included the social history of religion, gender and society, and traditional society and the origins of capitalism. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Neuschel or Robisheaux*

222A. Problems in the Intellectual History of the European Renaissance and Reformation. (CZ) Prerequisites: History 151A and reading knowledge of German, French, or Italian. C-L: Medieval and Renaissance Studies. One course. *Witt*

222B. Florence: Renaissance City. (CZ) C-L: Medieval and Renaissance Studies. One course. *Witt*

222C. S. Petrarch. (CZ) Focuses on the major works of fourteenth-century Italian humanitarian, Francesco Petrarch. One course. *Witt*

223S, 224S. The World Wars. (CZ) The causes, course, and consequences of World Wars I and II, from military, political, and economic perspectives; the legacy of World War II; special emphasis on understanding the experience of total war—not only for the individual soldier but for whole societies. One course each. *Biddle*

225S. Problems in Comparative Labor History. (SS) Common dilemmas and varying solutions in the cross-national development of labor-management relations, their political implications, and their larger historical significance. One course. *French or Keyssar*

226. Topics in the Labor History of the United States. (SS) One course. *Keyssar*

230S. Populism in Latin America. (CZ) An examination of the various theoretical frameworks developed for Latin American populism, followed by case studies focusing on issues such as the emergence of a modernizing state, the role of the masses in populist movements, and the class content and ideological and cultural parameters of such movements. One course. *James*

232A. S. Historical and Anthropological Approaches to Emotion. (CZ) Examines emotion as a collective and historical phenomenon prompted by dissatisfaction with rigid notions of culture and current concern about the social construction of the self and identity. C-L: Cultural Anthropology 232S. One course. *Reddy*

233S. Slave Resistance and Social Control in New World Societies. (CZ) The operation of slave societies in the Americas from the sixteenth to the nineteenth centuries focusing on master-slave relations and slave resistance. C-L: African and African-American Studies 233S and Comparative Area Studies. One course. *Gaspar*

234S. Political Economy of Development: Theories of Change in the Third World. (SS) See C-L: Political Science 234S; also C-L: Comparative Area Studies, Cultural Anthropology 234S, and Sociology 234S. One course. *Staff*

235S. The Antebellum South. (CZ) The economic, political, and social aspects of life in the South, 1820-1860. C-L: African and African-American Studies 235S. One course. *S. Nathans*

236A. Topics in the History of Monasticism. (CZ) The development of western medieval monasticism from its third-century origins in the Egyptian desert through the twelfth-century explosion of devotional communities. Varied topics include monastic anxiety and optimism about the nature of the human will; the origins, meaning, and practical experience of vows to poverty, chastity, stability, and obedience; and the growth of a monastic culture. Designed to guide advanced students through the professional study of monastic institutions and monastic historiography. French, German, or Latin necessary. C-L: Medieval and Renaissance Studies. One course. *Peyroux*

237S. Europe in the Early Middle Ages. (CZ) C-L: Medieval and Renaissance Studies. One course. *Staff*

238S. Europe in the High Middle Ages. (CZ) C-L: Medieval and Renaissance Studies. One course. *Staff*

239. History of Socialism and Communism. (CZ) The origins and development of socialist and communist movements from pre-Marxian times to the present. Not open to students who have taken History 120. C-L: Comparative Area Studies. One course. *Lerner*

240A. Multinationalism and Multiculturalism: Eastern Europe Example. (CZ) One course. *Lerner*

241A. S. The Origins of Totalitarianism, 1924-1954. (CZ) The development of the concept of totalitarianism over three decades. Responses to Italian Fascism, German National Socialism, and Soviet Stalinism among European intellectuals. Early theoreticians of totalitarianism: Halévy, Schmitt, Marcuse, Voegelin, Hilferding, Neumann, Hayek, Popper, Arendt, and Friedrich; critiques of the scholarly and ideological uses of totalitarianism. One course. *Hacohen*

242B. The Soviet 1920s: The Road to a New Synthesis. (AL) See C-L: Russian 281. One course. *Dobrenko or Lahusen*

248. History of Modern India and Pakistan, 1857 to the Present. (CZ) C-L: Comparative Area Studies. One course. *Richards*

251A. Topics in Intellectual History of Europe, 1250-1450. (CZ) C-L: Medieval and Renaissance Studies. One course. *Witt*

251B. Topics in Intellectual History of Europe, 1450-1650. (CZ) C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Witt*

252A. Construction of China in European and American Literature. (CZ) An examination, starting with Marco Polo's account of China, of representations of China in Euro-American writing toward an understanding of a Euro-American discourse on China. Emphasis on fiction, but consideration as well of the relationship between fictional and nonfictional writing (especially history, geography, and travelogue). While the approach is historical, contemporary representations of China are of primary concern. Not open to students who have taken History 252. One course. *Dirlik*

252B. Culture and Society in Contemporary China. (CZ) Developments in Chinese society and culture since 1978, focusing on social changes in China and on matters of culture. Culture here includes debates on culture and history, as well as various forms of cultural production (literature, film, and popular culture). Parallel developments in Pacific Asia (Japan, Taiwan, and Hong Kong, in particular). One course. *Dirlik*

253S, 254S. European Diplomatic History, 1871-1945. (CZ) Origins of the First and Second World Wars, the diplomacy of the wars, and the peace settlements which followed them. 253S: 1871-1918; 254S: 1919-1945. C-L: Comparative Area Studies. One course each. *Staff*

255A, S. Development of United States Courts of the Fourth Circuit. (SS) Consent of instructor required. See C-L: Political Science 238S; also C-L: Law 548S. One course. *Fish*

255B. War and the National State. (SS) No prerequisite, but Political Science 93 recommended. See C-L: Political Science 288. One course. *Goemans*

256. Modern Literature and History. (AL, CZ) See C-L: French 256; also C-L: Comparative Area Studies. One course. *Kaplan, Orr, or staff*

257. Comparative Latin America Labor. (CZ) An interdisciplinary examination of the monographic literature on Latin-American labor in the twentieth century. One course. *French*

260. Fifth and Fourth Century Greece. (CZ) See C-L: Classical Studies 222. One course. *Oates or Rigsby*

262. The Soviet Experience. (CZ) A survey of the history of Russia and the Soviet Union from the eve of the Revolution to the present day with particular emphasis on political, social, and cultural change and continuity. Not open to students who have had History 180. C-L: Comparative Area Studies. One course. *Lerner*

263. The Roman Republic. (CZ) See C-L: Classical Studies 224. One course. *Boatwright or Rigsby*

264. The Roman Empire. (CZ) See C-L: Classical Studies 225. One course. *Boatwright*

267S. England in the Sixteenth Century. (CZ) C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Herrup*

268S. England in the Seventeenth Century. (CZ) C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Herrup*

272S. *Fin-de-siècle* and Interwar Vienna: Politics, Society, and Culture. (CZ) The cultural milieu of *fin-de-siècle* and interwar Vienna. Freud, Kraus, the Austro-Marxists, Neurath, the Austrian School of Economics, Wittgenstein, the Logical Positivists, Popper, and Musil; monographs on Viennese culture (Schorske), feminism, and Austrian socialism. One course. *Hacohen*

273S, 274S. Topics in the History of Science. (CZ) Critical stages in the evolution of scientific thought. One course each. *Mauskopf*

275S. Asian and Asian-American Women in Comparative Perspective. (CZ) A woman-centered approach to the history of colonialism and nationalist struggles in Asia, the evolution of racist discourse and its impact on Asian immigration to the United States. One course. *Mazumdar*

276A. Asian-American Experience. (CZ) History of Asian Americans in the United States to World War II, focusing on immigration, conditions in the homeland which fostered immigration, and the legislative barriers such as the exclusion acts which prevented the immigration of Asians. The United States in the context of a global political economy; the impact of colonialism and imperialism in the shaping of Asian-American experience. One course. *Mazumdar*

277S. The Coming of the Civil War in the United States, 1820-1861. (CZ) One course. *Staff*

278S. The Civil War in the United States and Its Aftermath, 1861-1900. (CZ) One course. *Staff*

279, 280. Health, Healing, and History. (CZ) The development of medicine within the broader cultural context from prehistory to the twentieth century. One course each. *English*

281S. United States' Diplomacy since 1945. (CZ) C-L: Canadian Studies. One course. *Staff*

282S. Canada. (SS) See C-L: Canadian Studies 282S; also C-L: Comparative Area Studies, Cultural Anthropology 282S, Economics 282S, Political Science 282S, and Sociology 282S. One course. *Thompson or staff*

283S. Seminar in North American Studies. (CZ) See C-L: North American Studies 283S; also C-L: Cultural Anthropology 283S, Political Science 285S, Public Policy Studies 282S, Romance Studies 283S, and Sociology 283S. One course. *Staff*

285S, 286S. Oral History. (SS) Research on race relations and civil rights in the United States in the twentieth century using techniques of oral history. Consent of instructor required. One course each. *Chafe and Goodwyn*

287S. American History and Social Theory. (CZ) Contemporary theories of social order, social change, and revolution. One course. *Goodwyn*

288S. Germany and Japan in World War II. (CZ) A comparative inquiry into the experience of these two capitalist "late developing" nations that turned to fascism and militarism in the 1930s. Topics include business and the state in wartime mobilization, wartime labor and productivity, the experience of women at work and at home, impact of firebombings, wartime propaganda and racism, postwar memory of the wartime era. One course. *Koonz*

289S. War, Revolution, and Society in the Caribbean 1700-1815. (CZ) Explores the complex impact of European imperialism and the American, French, and Haitian revolutions upon Caribbean societies to the end of the Napoleonic wars. Military, economic, social, political, and institutional theories examined. One course. *Gaspar*

290S. Theoretical Bases of Social Interpretation. (SS) An interdisciplinary course on the historical development of theoretical formulations of particular importance to social historians and cultural anthropologists. Examines several fundamental problems posed by any effort to interpret social life. Considers how these problems show up and are handled within a number of approaches, loosely grouped as metaphysics, language, identity, and practice. C-L: Cultural Anthropology 220S. One course. *Reddy*

291S. Modern Jewish Politics. (SS) The development of the main currents in modern Jewish politics—nationalism, integrationism, and orthodoxy. Emphasis on the activities of these political movements in Europe and in the United States in the twentieth century. The influence of these movements on Israel. One course. *Mendelsohn*

292. Research Methods in Japanese. (SS) Consent of instructor required. See C-L: Japanese 291; also C-L: Cultural Anthropology 290, Political Science 291, and Sociology 291. One course. *Staff*

293. French Liberalism: An Intellectual History, 1815-1981. (CZ) Historical study of major French liberal thinkers in their political, social, and intellectual contexts. Readings in De Staël, Constant, Guizot, Tocqueville, Durkheim, Halévy, and Aron and historiography. Major themes: revolution, restoration, and liberalism's origins; liberals, the July Monarchy, and 1848; Durkheim, the Third Republic, and the new liberalism; World War I, totalitarianism, and contemporary French liberalism. One course. *Hacohen*

294S. Women and Medicine in the United States. (CZ) The history of women as patients and practitioners from the colonial era to the present. The concept of "practitioner" broadly defined, to include domestic medicine, midwives, nurses, physicians, and other "alternative" medical women. Themes include birth control, women's control of their own bodies, sources of authority for medical practice, race and health, and the underlying general history of medicine in the United States. One course. *Humphreys*

295S. Slavery and Freedom in Africa, to 1960. (CZ) How Africans created variations on the global themes of servility, slavery, and freedom. Includes various forms of slavery in Africa; gender and slavery; slave trades; the impact of the Atlantic economy on slavery in Africa; colonial policies of "emancipation," labor control, and labor coercion; African intellectual responses to the problem of slavery and African expressions of freedom, including freedom from colonial rule. C-L: African and African-American Studies 292S and Comparative Area Studies. One course. *Ewald*

296. United States Policy in the Middle East. (SS) See C-L: Public Policy Studies 257; also C-L: Comparative Area Studies. One course. *Kuniholm*

299S. Special Topics. (CZ) Seminars in advanced topics, designed for seniors and graduate students. Some semesters open to seniors and graduate students; some semesters limited to graduate students only. One course. *Staff*

Upperclassmen-Graduate Seminars

See History 201S, 202S, 210S, 215S, 216S, 219S, 220S, 225S, 230S, 233S, 235S, 237S, 238S, 239S, 247, 252A, 252B, 253S, 254S, 255A, 258S, 265S, 267S, 268S, 269S-270S, 273S, 274S, 277S, 278S, 281S, 282S, 285S, 286S, 287S, 295S, 299S.

COURSES CURRENTLY UNSCHEDULED

- 100C. Nineteenth-Century European Political History. (CZ)
- 100G. Twentieth-Century Economic and Social History of France. (CZ)
- 100H. History of France, 1860-1944. (CZ)
- 100I. United States/Latin American Relations, 1889-1950. (CZ)
- 100Q. The United States in Twentieth-Century Japan. (CZ)
- 100R. History of Austria. (CZ)
- 100Z. Perestroika in Nineteenth- and Twentieth-Century Russia. (CZ, FL)
- 101H. Structures, Science, and Society. (CZ)
- 122B. Japan: Population, Resources, and Development, 1600-1940. (CZ)
- 128. Comparative Social Movements. (CZ)
- 131A. History of Mexico and the Caribbean in the Nineteenth and Twentieth Centuries. (CZ)

- 135A. Germany from the Thirty Years' War to Unification in 1871. (CZ)
- 151C. European Intellectual History, 1789-1848. (CZ)
- 155. Mexico From Pre-Columbian Times to the Present. (CZ)
- 167S. United States and Canadian Constitutional Issues. (CZ)
- 171B. History of Women in Modern Europe. (CZ)
- 172A. Comparative Perspectives on Women in Asia, Africa, and the Middle East. (CZ)
- 174A. History of Colonial Hispanic America from Pre-Columbian Times to the Wars of Independence. (CZ)
- 176S. The Southern Plantation as Historical Laboratory: Research Seminar. (CZ)
- 181. Alexander the Great. (CZ)
- 187. History and Religions of North Africa. (CZ)
- 189A. Medicine in the West. (CZ)
- 204. German Society, 1914-1945. (CZ)
- 205S. Gender and War. (CZ)
- 207S. Geographic Perspectives in History I: Western Europe and the Americas. (SS)
- 208S. Geographic Perspectives in History II: Asian and Pacific Worlds. (SS)
- 212. The American Indian in the Revolutionary Era, 1760-1800. (CZ)
- 215S. The United States in International Relations: The Eighteenth and Nineteenth Centuries. (CZ)
- 217. Problems in American Colonial History. (CZ)
- 218S. Perspectives on the Atlantic World. (CZ)
- 219S, 220S. History of Science and Technology. (CZ)
- 227-228. Recent United States History: Major Political and Social Movements. (CZ)
- 231S. Readings in Latin American Colonial History. (CZ)
- 243-244. Marxism and History. (SS)
- 245, 246. Social and Intellectual History of China. (CZ)
- 247. Mughal India. (CZ)
- 249-250. Social and Intellectual History of the United States. (CZ)
- 258S. Social Conflict in Weimar and Nazi Germany. (CZ)
- 259. Archaic Greece. (CZ)
- 261. Alexander and the Hellenistic World. (CZ)
- 265S. Problems in Modern Latin American History. (SS)
- 266. Late Antiquity. (CZ)
- 269S-270S. British History, Seventeenth Century to the Present. (CZ)
- 271S. The Law of War. (CZ)

THE MAJOR

For Students Matriculating in Fall 1995 and thereafter:

The history major has two basic objectives. First, it seeks to offer students broad exposure to the histories of our own and other societies, to the recent and the more distant past, and to the variety of approaches to the study of history. Second, it seeks to allow study in depth of the history of a particular time and place, or a particular type of history. The goal of breadth is addressed in the distribution requirements for course work across three geographic areas and in premodern as well as modern history. Depth is achieved through the requirement that students identify a primary field of study.

Major Requirements. Ten history courses, two at the introductory level (that is, 21, 22, 53, 54, 75, 76, 91, 92S, 93S) and eight at the 100 level or above.

The ten courses are to be distributed as follows:

1. At least two courses in each of three out of the four geographic areas, listed below.
2. At least four courses in the student's primary field of history. One of these must be a research seminar.

The eight 100-level and above courses are to be distributed as follows:

1. At least two courses that are pre-1800 in focus.

2. At least two research seminar courses. These are usually History 195S, History 196S, or 200-level courses. Substitution of other seminars must be approved by the director of undergraduate studies and the instructor.

Geographic Areas are (1) United States and Canada; (2) Europe (includes Britain and Russia); (3) Latin America, Mexico, Caribbean; (4) Africa, Middle East, Asia. In cases of global or comparative courses, or other unclear cases, consult the history major's handbook or contact the Office of Undergraduate Studies.

Pre-1800 courses: 53, 54, 55, 57, 98, 107A, 113, 115A, 116, 117, 119A, 119B, 121A, 124S, 126S, 127A, 131A, 131B, 132, 133A, 133B, 133C, 134A, 138, 143A, 145A, 148, 151A, 154A, 155, 156A, 156B, 157A, 158A, 168S, 169A, 171A, 173, 174A, 179, 183S, 187, 189A, 190, 193, 194, 195S, 196S (Applicable sections; check with departments), 211A, 213S, 217, 219S, 221, 222A, 222B, 231S, 233S, 236A, 237S, 238S, 251A, 251B, 259, 260, 263, 267S, 268S, 279, 289S, and 295S.

The primary field is defined as any one of the four geographic areas. In addition, a thematic area can serve as a primary field. Examples of thematic areas are (1) history of the African diaspora, (2) history of labor, (3) history of medicine, science, and technology, (4) history of women, (5) military history. Students may define other thematic areas, with approval of the director of undergraduate studies and the student's advisor.

Double counting: Courses can fulfill two or more requirements. For example, History 21 would count as "introductory," as "European," and for a student with primary focus on Europe, would count toward the primary area requirement. However, introductory courses do not count toward the pre-1800 requirement.

Advanced Placement: A student may receive course credit toward graduation for Advanced Placement history courses but the history department does not count Advanced Placement credits toward the requirements for the history major.

For Students Who Matriculated Before 1995:

Introductory Courses. Two introductory courses in history (21, 22; 53; 54; 75; 76; 91; 92; 93S).

Major Requirements. Eight courses in history including (1) at least two introductory courses (History 94 and 98 do not fulfill this requirement), (2) at least one course in each of three out of the five fields described above, (3) two courses in an undergraduate seminar (195S, 196S) or on the 200 level. Some of the courses at this level are two-semester sequences; a few of these require the student to take both semesters in order to get a grade. Except for these few cases, students are not required to take both semesters of two-semester courses.

Advanced Placement Credit. Two of the eight courses needed for the major may be fulfilled by advanced placement credits. If two additional advanced placement credits have been granted they may be applied toward the thirty-four credits needed for graduation, but may not be applied to the history major.

Transfer Credit. At least six of the eight courses required for the history major must be taken at Duke. Exceptions to this rule may be made for students with Advanced Placement credit who also study abroad while at Duke. In such instances, two Advanced Placement credits and two credits from a study abroad program may apply toward the eight courses required for the major.

Foreign Languages. Majors interested in a particular area of study benefit from knowledge of the language of that area. Majors who contemplate graduate work are reminded of the requirement of a reading knowledge of one or two foreign languages.

Majors Planning to Teach. Majors who plan to teach in secondary schools should consult an advisor in education. Rising juniors who intend to practice-teach in the senior year should take the 195S-196S or 197S-198S seminars or 200-level courses as juniors.

Honors/Distinction. Any student who is qualified (see the section on honors in this bulletin) may apply to the director of undergraduate studies for permission to undertake work leading to a degree with distinction in history.

History courses for undergraduates matriculating before 1995 are offered in five fields, as noted below. Students majoring in the department must complete at least one course in each of three fields. A course listed in two fields may be used to meet the requirement in either of those fields, but may not be used for both.

Africa, Asia, Canada, Caribbean, Latin America, Russia. History 75, 76, 98, 101C, 100E, 100I, 100J, 100Q, 100U, 100VS, 101G, 101K, 101M, 102G, 108C, 108D, 108F, 109, 110, 112A, 112B, 114B, 115A, 115B, 120, 122B, 123S, 124S, 127A, 127B, 128, 131A, 131B, 132, 136A, 136B, 136C, 139A, 139B, 141A, 142A, 142B, 142C, 143A, 143B, 146, 147C, 152, 155, 158A, 159S, 161, 162A, 164, 167S, 168S, 170C, 172A, 172B, 174A, 174B, 179, 180, 183S, 184S, 185A, 186, 187, 193, 194; 195S, 196S sections 5, 8, 9, 17, 18, 20, 21, 22, 23, 29, 30, 34, 35, 36, 37, 40, 43, 45, 46, 49, 51, 57, 59, 65, 72, 73, 81, 82; 201S, 202S, 206, 208S, 218S, 225S, 230S, 231S, 232, 233S, 234S, 239S, 243, 244, 245, 246, 247, 248, 252A, 252B, 257, 262, 265S, 275S, 282S, 295S, 296.

Ancient, Medieval and Renaissance. History 21, 21D, 21S, 51, 53, 54, 55, 57, 94, 100B, 100K, 107A, 116, 117, 125, 126S, 133A, 133B, 133C, 134A, 134B, 138, 148, 151A, 156A, 173, 174A, 178A; 195S, 196S sections 11, 13, 36, 37, 41, 48, 52, 80; 221, 222A, 222B, 236A, 237S, 238S, 251A, 251B, 260, 263, 268S.

Medicine, Military, Science, Technology. History 101H, 118A, 118B, 123S, 132, 149, 154A, 157A, 157B, 157C, 163A, 163B, 178A, 189A, 189B, 190; 195S, 196S sections 4, 16, 75; 203S, 205S, 210S, 211A, 213S, 219S, 220S, 229S, 223S, 224S, 225S, 271S, 273S, 274S, 279, 280, 294S.

Modern Europe. History 21, 21D, 21S, 22, 22D, 22S, 100A, 100B, 100C, 100F, 100G, 100H, 100K, 100L, 100M, 100R, 100W, 100X, 101C, 101E, 101H, 101N, 107A, 107B, 109, 110, 112A, 112B, 113A, 113B, 114B, 117, 118C, 120, 123S, 126S, 128, 130A, 135A, 135B, 135C, 137, 138, 147A, 147B, 147C, 151A, 151C, 151E, 151F, 154A, 154B, 154D, 155, 156B, 158A, 168S, 171A, 171B, 173, 180, 185A, 188A; 195S, 196S sections 7, 10, 13, 15, 26, 28, 31, 32, 34, 36, 44, 48, 49; 204, 207S, 209S, 213S, 214, 221, 222, 223S, 224S, 225S, 239S, 240A, 241A, 252A, 255B, 256, 258S, 262, 268S, 271S, 272S, 293.

United States. History 91, 91D, 91S, 92, 92D, 92S, 93S, 100I, 100P, 100Q, 101C, 101J, 101L, 101N, 108C, 108D, 108F, 111A, 111B, 111C, 114B, 118A, 119A, 119B, 121A, 121B, 121C, 123S, 124S, 128, 129A, 129B, 140S, 145A, 145B, 147B, 153, 155, 157A, 157B, 157C, 158A, 159S, 160, 162A, 163A, 163B, 163C, 165, 166S, 167S, 168S, 169A, 169B, 170C, 175S, 176S, 177A, 177B, 189B; 195S-196S sections 2, 3, 4, 6, 12, 14, 18, 19, 20, 24, 25, 27, 32, 33, 38, 40, 43, 45, 46, 49, 50, 54, 57, 66, 69, 74, 77, 78, 79; 205, 206, 211A, 212, 216S, 217, 223S, 224S, 225S, 226, 233S, 235S, 249-250, 252A, 255A, 255B, 271S, 275S, 277S, 278S, 281S, 285S, 286S, 287S, 296.

THE MINOR

The history minor offers students specializing in another department or program the opportunity to enrich their studies with an historical perspective. The minor requirements are a minimum of five history courses, at least three of which must be at the 100 level or above. Courses taken pass/fail or Advanced Placement credits do not count toward the minor; one transfer course may count toward the requirements for the minor.

House Courses (HC)

House courses, offered in the fall and spring terms, are intended to provide academic experiences that are not offered by regular departmental courses. A house course must be hosted by a residential unit, sponsored by a faculty member in Trinity College of Arts and Sciences, reviewed by the department of that faculty member, and approved by the Committee on Courses of Instruction of the Arts and Sciences Council. House courses carry a half-course credit. In the School of Engineering, house courses cannot be used to meet degree requirements. In Trinity College, not more than two semester-course credits earned in house courses can be counted toward the course requirement for graduation. House courses do not count toward other requirements. Grades are submitted only on the pass/fail basis. Further details are available in 04 Allen Building.

179. House Course. Special topics course in fall semester. Information about specific offerings each term available in 04 Allen Building. Pass/fail grading only. Half course. *Staff*

180. House Course. Special topics course in spring semester. Information about specific offerings each term in 04 Allen Building. Pass/fail grading only. Half course. *Staff*

Human Development (HDV)

Professor Thompson, *Director*

A certificate, but not a major, is available in this program.

The goal of this interdisciplinary program is to broaden and enhance the perspectives of students interested in human development. The program seeks to foster an understanding and appreciation of how biological, psychosocial, and cultural factors act together in development throughout the life course; highlight the ways in which different disciplines conceptualize and study development; demonstrate the complementarity of disciplinary perspectives; and facilitate dialogue among faculty and students, illustrating the complementarity of and necessity for multidisciplinary perspectives.

Achievement of the program's goal is facilitated by an integrated curriculum of required and elective courses, a research apprenticeship, a lecture series, and other special events. An active advisory procedure assists students in planning learning opportunities. A certificate is available for students who complete program requirements. Participation in selective parts of the program and in the advisory system, however, is available to all undergraduates whether or not they seek the certificate.

For the program certificate, the curriculum includes two elective courses and four required courses. The required courses, which are described below, are Human Development 124 (Human Development); *either* Human Development 180 (Psychosocial Aspects of Development) *or* Psychology 159S (Biological Psychology of Human Development); Human Development 190 (Research Apprenticeship in Human Development); and Human Development 191S (Senior Seminar in Human Development).

Two elective courses are to be chosen from an illustrative list of biological, psychological, and social scientific courses affiliated with the program published in the program brochure. This list of elective courses includes Human Development 192S (Special Topics in Human Development).

The research apprenticeship arranged through the program and the related senior seminar would ordinarily be available only to students seeking the program certificate. Other components of the program are available to all undergraduates.

HUMAN DEVELOPMENT COURSES

124. Human Development. (SS) Biological, behavioral, and cultural perspectives and approaches. Multidisciplinary. Especially for sophomores. Juniors and seniors by consent only. C-L: Psychology 124 and Sociology 124. One course. *Anderson, Gustafson, or staff*

180. Psychosocial Aspects of Human Development. (SS) See C-L: Psychology 130; also C-L: Sociology 169. One course. *Staff*

190. Research Apprenticeship in Human Development. Part of the Undergraduate Program in Human Development. Supervised work may be in a laboratory, project, or organizational setting. Consent of instructor required. One course. *Thompson and staff*

191S. Senior Seminar in Human Development. (SS) Part of the Undergraduate Program in Human Development. Consent of instructor required. One course. *Thompson and staff*

192S. Special Topics in Human Development. (SS) Part of the Human Development Program. Selected theoretical and methodological topics with emphasis on social change and public leadership in aging societies. One course. *Staff*

Immunology

For courses in Immunology, see Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates.

Italian

For courses in Italian, see Romance Studies.

Japanese

For courses in Japanese, see Asian and African Languages and Literature.

Judaic Studies (Center for Judaic Studies)

Associate Professor Bland (religion), *Director and Director of Undergraduate Studies*; Professors Mendelsohn (history), C. Meyers (religion), E. Meyers (religion), and Shatzmiller (history); Assistant Professor Zakim (Asian and African languages and literature)

A program in Judaic studies may be taken as part of a major in religion or as a supplement to any other major. It may also be taken under Program II. Students are eligible for a certificate in Judaic studies after completing four courses in the program. For descriptions of the courses consult the listings under the specified departments.

German (Yiddish)

1, 2. Elementary Yiddish. *Staff*

Hebrew

1, 2. Elementary Modern Hebrew. *Zakim*
63, 64. Intermediate Modern Hebrew. *Zakim*
125S, 126S. Advanced Modern Hebrew. *Zakim*
191, 192, 193, 194. Independent Study. *Staff*

History

134A. History of the Jews in the Middle Ages. *Shatzmiller*
147A. The Jews in Eastern Europe. *Mendelsohn*
291S. Modern Jewish Politics. *Mendelsohn*

Literature

131. Special Topics in Literature and the Judaic Tradition. *Staff*

Religion

40. Judaism. *Staff*
100. The Old Testament/Hebrew Bible. *C. Meyers, E. Meyers, Peters, or Wintermute*
101B. Selected Studies in the Bible: Prophets. *Staff*
101C. Selected Studies in the Bible: Writings. *Staff*
109. Women in the Biblical Tradition: Image and Role. *C. Meyers*
115-116. Introduction to Biblical Hebrew. *Staff*
133. The Foundations of Post-Biblical Judaism. *E. Meyers*
134. Jewish Mysticism. *Bland*
136. Contemporary Jewish Thought. *Bland or E. Meyers*
175. Archaeology and Art of the Biblical World. *C. Meyers or E. Meyers*
177. Perspectives in Archaeology. *C. Meyers, E. Meyers, Younger, and staff*
195B, 196B. Junior-Senior Seminars: Jewish and Christian Traditions. *Staff*
207. Hebrew Prose Narrative. *Staff*
208. Classical Hebrew Poetry: An Introduction. *Staff*
220. Rabbinic Hebrew. *E. Meyers or staff*

Opportunities for independent study are also offered in the Department of Religion under 191, 192, 193, 194. Procedures for registration and applications are available in 118 Gray Building.

Special attention is directed to those courses in New Testament which are relevant to the study of Rabbinic Judaism Religion 106, 107, 108, and 111.

Korean

For courses in Korean, see Asian and African Languages and Literature.

Latin

For courses in Latin, see Classical Studies.

Latin American Studies (LST)

Associate Professor James, *Chair, Council on Latin American Studies*

A certificate, but not a major, is available in this program.

The program in Latin American Studies, which is administered by the Council on Latin American Studies, provides students with the opportunity for an interdisciplinary and in-depth study of the realities of Latin American societies and cultures. Courses in this area are sponsored by the program, offered through several academic departments and programs, and taught by many faculty members. In addition to offering courses and a certificate on completion of the requirements, the Council on Latin American Studies also sponsors lectures, conferences, film festivals, and a faculty exchange with El Colegio de Mexico that brings visiting professors to Duke. Moreover, the council and the Institute of Latin American Studies at Chapel Hill sponsor the Duke-UNC Program in Latin American Studies, which provides opportunities for collaboration with faculty and students from the University of North Carolina who are interested in Latin America. The Duke-UNC Program sponsors yearly faculty exchanges between the two institutions, joint undergraduate seminars, and other special initiatives.

Students interested in earning a certificate in Latin American studies are encouraged to declare it by completion of their fifth semester. Students may also elect this interest in Latin America while participating in a Duke-approved study abroad program either during a summer or during their junior year. Duke offers its own program in Bolivia during the academic year, based at the Universidad Mayor de San Andrés and the Universidad Católica Boliviana.

For further information consult the chair of the Council on Latin American Studies or the program coordinator at 2114 Campus Drive.

LATIN AMERICAN STUDIES CONCENTRATION FOR COMPARATIVE AREA STUDIES MAJORS AND MINORS

Comparative Area Studies majors and minors interested in choosing Latin America as their primary area of concentration within that major or minor should consult the director of comparative area studies.

CERTIFICATE IN LATIN AMERICAN STUDIES FOR STUDENTS WHO ARE NOT COMPARATIVE AREA STUDIES MAJORS OR MINORS

A certificate is available in the Latin America Studies program to all undergraduates who are not comparative area studies majors or minors. The course of study for program participants is intended to be interdisciplinary. Students working toward a certificate in Latin American Studies will declare a major in an academic department. To qualify for the certificate, students take the interdisciplinary capstone course (Latin American Studies 198), fulfill the indicated language requirement, and take four additional area courses, three of which must be at or above the 100 level. Also, at least three different departments must be represented overall, with no more than three courses counting from one single department or major. The language requirement can be fulfilled in one of three ways: 1) by taking three language courses below the 100 level in any one of the most commonly taught languages spoke in Latin America: Spanish, Portuguese, French; 2) by taking one course taught in any one of these languages at the 100 level or above; or 3) by taking two courses in any one of the less commonly taught Latin American languages (such as Aymara, Quéchuá, Yucatec Maya). Aymara and Quéchuá language courses are offered as part of the Duke-in-the-Andes

Program in Bolivia. A Summer Intensive Yucatec Maya Language Program is also offered through the Duke-UNC Program in Latin American Studies, on the UNC campus.

Appropriate courses may come from the list given below, or may include other courses not listed below (new courses, special topics courses, and independent study) with at least 50% of course content on a Latin American topic and with term papers or other major projects focusing on a Latin American subject. To determine if specific courses meet requirements for the certificate, students should consult the program coordinator.

Regular courses are described under the listing of the various departments. Students may also wish to take advantage of house courses offered on Latin American topics although house courses cannot satisfy the requirements of the certificate.

LATIN AMERICAN STUDIES PROGRAM COURSES (LST)

198. Special Topics in Latin American Studies. (AL, CZ) A problem-oriented course integrating approaches from two disciplines; team-taught. Topics and disciplines vary from year to year. For juniors and seniors. C-L: Spanish 124. One course. *Staff*

200S. Seminar in Latin American Studies. Interdisciplinary study of geographical, historical, economic, governmental, political, and cultural aspects of modern Latin America and the current issues facing the region. Specific topics will vary from year to year. For seniors and graduate students. One course. *Staff*

LATIN AMERICAN AREA COURSES

Regularly Scheduled Courses

Art and Art History

195. Pre-Columbian Art and Culture of Andean South America. *Reents-Budet*

Cultural Anthropology

199A, S. The Articulation of Culture in the Bolivian Andes. *Staff*

199B. Bolivian Cultural Anthropology. *Staff*

199C. Bolivian Culture. *Staff*

199E, S. Colonialism, Ethnicity and Gender in Postrevolutionary Bolivia. *Staff*

208S. Postcolonial Anthropology. *Silverblatt or Starn*

Economics

175/275. Economics of Modern Latin America. *Staff*

Environment

277. Conservation and Sustainable Development I. *Staff*

278. Conservation and Sustainable Development II. *Staff*

History

75. The Third World and the West. *French or Little*

127A. The Caribbean, 1492-1700. *Gaspar*

127B. The Caribbean in the Eighteenth Century. *Gaspar*

131B. The Spanish Caribbean. *TePaske*

136A. Introduction to Contemporary Latin American Reality. *James*

136C. Nineteenth-Century Latin America: Building Postcolonial Nations. *Staff*

162A. Diplomatic Relations in the Western Hemisphere. *French*

168S. The Atlantic Slave Trade. *Gaspar*

170C. Afro-Brazilian Culture and History. *French*

174B. Modern Latin America. *Staff*

225S. Problems in Comparative Labor History. *French*

230S. Populism in Latin America. *James*

233S. Slave Resistance and Social Control in New World Societies. *Gaspar*

257. Comparative Latin American Labor. *French*

North American Studies

110. Introduction to North America. *Staff*

Political Science

151. Introduction to Latin American Politics. *Archer*

151A. Introduction to Latin American Politics (taught in Spanish). *Archer*

151D. Introduction to Latin American Politics. *Archer*

253S. Comparative Government and the Study of Latin America. *Archer*

Public Policy Studies

284S. Public Policy Process in Developing Countries. *Ascher*

286S. Economic Policy-Making in Developing Countries. *Conrad or Ramachandran*

Sociology

110D. Comparative Sociology: Latin America. *Gereffi*

126. Third World Development. *Gereffi or Parnell*

188B,S. Colonialism, Ethnicity, and Gender in Postrevolutionary Bolivia. *Staff*

Spanish

115, 116. Introduction to Spanish-American Literature. *Staff*

117A,S. Spanish-American Short Fiction. *Perez-Firmat or staff*

117B, S. Bolivian Contemporary Short Fiction. *Staff*

121. Latin American Literature in Translation. *Dorfman*

140A,S. The Articulation of Culture in the Bolivian Andes. *Staff*

140B,S. Colonialism, Ethnicity, and Gender in Postrevolutionary Bolivia. *Staff*

143S. Literature of the Discovery and Conquest of America. *Staff*

144S. Spanish-American Literature of Identity. *Perez-Firmat*

145S. Literature of the Hispanic Minorities of the United States. *Perez-Firmat*

146. The Spanish-American Novel. *Moreiras or staff*

147S. Latin American Women Writers. *Staff*

148. Colonial and Postcolonial Studies in Latin America and the Caribbean. *Mignolo*

175S. Hispanic Literature and Popular Culture. *Sieburth*

245. Latin American Poetry. *Moreiras or staff*

246. Textual Politics in Nineteenth-Century Spanish-American Literature. *Nouzeilles*

250. Latin American Film. *Moreiras and staff*

Special Topics Courses, Offered Periodically

Art and Art History

257S. Topics in Pre-Columbian Art and Culture. *Reents-Budet*

History

104B. A Survey of Latin American History through Film. *TePaske*

Portuguese

200S. Seminar in Portuguese Literature. *Damasceno*

202S. Topics in Portuguese and Brazilian Literature and Culture. *Damasceno*

Spanish

122S. Topics in Latin American Literatures and Cultures. *Staff*

131. Topics of Hispanic Civilization. *Staff*

244. Topics in Twentieth-Century Latin-American Fiction. *Moreiras*

248. Studies in Spanish-American Literature. *Staff*

Linguistics (LIN)

Core faculty: Associate Professor Andrews, *Chair*; Associate Professor Tetel, *Director of Undergraduate Studies*; Professors Apte (cultural anthropology), Butters (English), Holloway (English), O'Barr (cultural anthropology), Thomas (romance studies); Associate Professors Day (psychology), Mazuka (psychology), Posey (philosophy), Quinn (cultural anthropology), Rasmussen (German); Assistant Professor Walther (German); Adjunct Assistant Professor Keul (German). *Affiliated faculty:* Professors Biermann (computer science), Borchardt (German), Cooke (Asian and African languages and literature), Fish (English), Flanagan (philosophy), Garci-Gómez (romance studies), Hasher (psychology), Rubin (psychology), Hernstein Smith (literature); Professor of the Practice Gopen (English)

A major is available in this program.

From the earliest philosophers to modern neuroscientists, researchers from a wide range of disciplines have explored a diverse range of issues concerning the human capacity for language and the diversity of the world's languages. Linguists work at the intersection of these issues and define linguistics as the science of language and languages. During the last 150 years, linguists have developed a variety of theoretical paradigms to describe and explain language history, dialect variation, cross-cultural similarities and differences, the neurological processing and production of language, and the evolutionary emergence of language.

The linguistics major at Duke is unusual in its range of theoretical approaches coupled to the study of languages of the world. The required courses for the major stress empirical methods and the global data base; the theory courses expose the student to the perspectives offered by historical and comparative linguistics, structural linguistics, generative linguistics, sociolinguistics, semiotics, discourse analysis, philosophy, cognitive linguistics and psycholinguistics. The major maintains the traditional and mainstream body of linguistic inquiry and, at the same time, encourages exploration of the most recent developments in language study that issue from cultural and literary theory and the biological sciences.

LINGUISTICS PROGRAM COURSES

101. Introduction to Linguistics. (SS) Introduction to the scientific study of linguistics and languages. Topics include the origin and nature of language, methods of historical and comparative linguistics, theories and schools of linguistics, empirical and descriptive approaches to the study of language, including phonology, morphology, semantics, and syntax. C-L: Comparative Area Studies, Cultural Anthropology 107, and English 111. One course. *Butters or Tetel*

102. Languages of the World. (SS) The major languages of the world viewed in the context of the communicative and signficante functions of language as parameters that shape and define society. The role of language in defining and structuring culturally-based relationships from a semiotic point of view. The structure, writing systems, phonology, morphology, and lexicon of languages from the following groups: Indo-European, Semitic, Turkic, Finno-Ugric, Caucasian, Afroasiatic, Sino-Tibetan, Niger-Kordofanian, Dravidian, and Native American languages. C-L: Comparative Area Studies, Cultural Anthropology 114, and English 114. One course. *Andrews or Tetel*

200. Issues in Second Language Acquisitions. (FL, SS) Analysis of principles of second language acquisition in the context of theoretical and applied language paradigms. Psychological, anthropological, and sociological theories included where relevant. One course. *Andrews*

215S. Senior Seminar in Linguistics. (SS) Theory and methods of comparative linguistics. Diachronic and synchronic approaches to the study of comparative linguistics in phonology, morphology, morphophonemics, syntax, and lexical categories in the context of

the world's language. Both I-E and non I-E included. Topics include theories of reconstruction, languages in contact, abductive processes, and questions of linguistic typology. One course. *Andrews, Butters, or Tetel*

LINGUISTICS COURSES LISTED BY DEPARTMENT

Regularly Scheduled Courses:

Computer Science

274S. Computational Linguistics Seminar. *Biermann*

Cultural Anthropology

110. Advertising and Society. *Luttrell, O'Barr, J. Smith, or Wilson*

119. Language, Culture, and Society. *Apte, O'Barr, or Strauss*

250S. Culture and Discourse. *Apte, Ewing, O'Barr, Quinn, or Strauss*

English

*48A. Language, Mind, and Human Behavior. *Tetel*

112. English Historical Linguistics. *Butters or Tetel*

208. History of the English Language. *Butters or Tetel*

Germanic Languages and Literature

260. History of the German Language. *Keul or Rasmussen*

**261. Second Language Acquisition Theory and Practice. *Walther*

**262. Applied Linguistics. *Rasmussen or Walther*

Philosophy

103. Symbolic Logic. *Brandon or Posy*

109. Philosophy of Language (C-L: English 109). *Posy*

*112. Philosophy of Mind. *Flanagan*

250S. Topics in Formal Philosophy. *Posy*

Psychology

*92. Cognitive Psychology: Introduction and Survey. *Day, Hasher, Rubin, or Serra*

*102. Mind, Brain, and Computers. *Schmajuk*

*125. Memory and the Brain. *Swartzwelder*

134. Psychology of Language. *Day*

**153S. Issues in Language Development. *Mazuka*

*210S. Cognition. *Day*

*220S. Psycholinguistics. *Day or Mazuka*

Romance Studies

French

118. Advanced Translation and Stylistics. *Thomas*

210. The Structure of French. *Thomas*

211. History of the French Language. *Thomas*

Spanish

210. History of the Spanish Language. *Garci-Gómez*

Slavic Languages and Literature

Balto-Finnic

200. Balto-Finnic Linguistics. *Staff*

Russian

174. Gender and Language. *Andrews*

185S. Introduction to Slavic Linguistics. *Andrews*

186S. History of the Russian Language. *Staff*

- 201S. A. Comparative East Slavic Linguistics. *Andrews or Sell*
- 201S.B. Comparative West Slavic Linguistics. *Andrews or Sell*
- 201S.C. Comparative South Slavics Linguistics. *Andrews*
- 201S.D. Common Slave Linguistics. *Andrews*
- 203S. Old Church Slavonic. *Staff*
- 205. Semiotics and Linguistics. (C-L: English 205). *Andrews*

Special Topics Courses, offered periodically:

Cultural Anthropology

- 112. Current Topics in Linguistics (C-L: English 119). *Staff*
- Linguistics
- Law

English

- *48A. Focus Program on Writing or Language: Language, Mind, and Human Behavior. *Tetel*
- 119. Current Topics in Linguistics (C-L: Cultural Anthropology 112). *Staff*
- Linguistics and Pragmatics
- Language and Law

Romance Studies

- *210S. Topics in Linguistics. *Staff*

Slavic Languages and Literature

Russian

- 119S. Topics in Slavic and Northern European Languages. *Staff*

THE MAJOR

The major is composed of ten courses, eight of which must be at the 100 level or above. The courses are devised to provide depth and breadth in linguistic theory, the different schools of linguistics, the history and development of linguistic thought, and the interdisciplinary aspects of linguistics in the context of languages and cultures. Majors must take Linguistics 101 and 102, which define the fundamental questions of linguistic theory in the context of the world's languages; and in the senior year the capstone course Linguistics 215S, which adds cohesion to the major. For depth, the student is required to take three courses from the list of theory courses, which provide the necessary theoretical and empirical constructs for the study of linguistics. In addition, two courses are required in one of the concentrations in a specific area of linguistics. All majors are required to take at least two foreign language courses at or above the 100-level.

MAJOR REQUIREMENTS

Introductory Courses (2):

- Introduction to Linguistics (Linguistics 101)
- Languages of the World (Linguistics 102)

Theory: Three (3) courses in the study of theoretical linguistics. Courses to be chosen from the following list:

Regularly Scheduled Courses:

Computer Science

- 274S. Computational Linguistics Seminar

Cultural Anthropology

- 119. Language, Culture, and Society
- 250S. Culture and Discourse

English

- 112. English Historical Linguistics
- 205. Semiotics and Linguistics (C-L: Russian 205)

Philosophy

- 103. Symbolic Logic
- 109. Philosophy of Language

Psychology

- 134. Psychology of Language
- *220S. Psycholinguistics

Slavic Languages and Literature**Russian**

- 174. Gender and Language (C-L: Cultural Anthropology 174)
- 205. Semiotics and Linguistics

Special Topics Courses, offered periodically:**Cultural Anthropology**

- 112. Current Topics in Linguistics (C-L: English 119)

English

- 119. Current Topics in Linguistics (C-L: Cultural Anthropology 112)

Disciplinary Concentration. Two (2) courses in one of the areas listed below. No course taken for credit as Theory may be counted to fulfill the disciplinary concentration requirement. Qualifying courses are listed below following the complete description of major requirements.

***Cognitive Science**

Cultural Anthropology

English

Germanic

****Language Acquisition**

Philosophy

Psychology

Romance Studies

Slavic Languages and Literature

* Coursework in cognitive science is given under individual departments and is marked by *.

** Coursework in language acquisition is given under individual departments and is marked by **.

Senior Seminar in Linguistics. (Linguistics 215S). The capstone course for the major, usually taken in the senior year.

Language Requirement. Two (2) semester courses in a single language at or above the 100-level, excluding languages in which the student possesses native proficiency in speech and writing. Students with advanced placement credits or other evidence of foreign language proficiency are not exempted from this requirement. Advisor's approval is required in order to determine the language chosen for the major. The specific language courses are too numerous to list here. Advisors should also be consulted for specific approval of the language choice if it does not conform to the list below or in the case of a tri-lingual student: Arabic,

Chinese, French, German, Greek, Hebrew, Hindi, Italian, Japanese, Korean, Latin, Polish, Portuguese, Russian, Spanish, Swahili.

HONORS/DISTINCTION

The Linguistics Program offers work leading to graduation with distinction. See the section on honors in this bulletin and the program chair.

Literature Program (LIT)

Professor Jameson, *Chair*; Professor Kaplan, *Director of Undergraduate Studies*; Professors Fish, Lentricchia, Mignolo, Moi, Radway, Rolleston, B. H. Smith, Stewart, Surin, Thomas, and Tompkins; Associate Professors Gaines, Lahusen, Lubiano, Moreiras, and Willis; Assistant Professors Fischer and Hardt; Research Professors Dorfman and Mudimbe; Visiting Assistant Professor Benamou. *Affiliated faculty*: Professors Burian (classical studies), Clum (English), Cooke (Asian and African languages and literature), Davidson (English), Davis (classical studies), Orr (romance studies), Torgovnick (English), and Wharton (art history); Associate Professors Hell (Germanic languages and literature), Morton (Germanic languages and literature), Moses (English), Powell (art history), Stiles (art history), and Wang (Asian and African languages and literature); Assistant Professors Gheith (Slavic languages and literatures) and Risholm (Germanic languages and literature); Associate Professor of the Practice Khanna (Asian and African languages and literature)

A major is available in this program.

20S. Introduction to Literature. (AL) Introduction to the study of literature and other forms of cultural expression, such as film. Different introductory approaches will be used in each section (for example, a systematic account of literary genres, a historical survey of ideas and forms of fiction, concepts of authorship and subjectivity, or of literary meaning and interpretation). More than one national literature or culture represented. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

50S. Special Topics in the FOCUS Program. (AL) Designed especially for first-year students interested in world literature, culture, and critical theory. Topics vary each semester offered. One course. *Staff*

90. Perspectives on Literary and Cultural Study. (AL) An introduction to four areas of investigation vital to the Literature Program: film and video, cultural studies, literary studies, and theory. May be team-taught by several members of the program with expertise in one of these areas. Focus on a centralizing theme, for example: the family, the trial, or celebrity. Strongly recommended for majors. One course. *Staff*

95. What Is Literature? (AL) Introduction to the idea of literature from an innovative and questioning position, to a number of major modern thinkers, and to theory in general. The relationship of literature to history; theories of reading and interpretation; and the concepts and structures of thought associated with modernism and postmodernism. One course. *Staff*

96. Contemporary Literary and Cultural Theory: An Introduction. (AL) The major concepts and principles of contemporary literary theory. "Poststructural" approaches to language and textuality, the invention of "postmodernism," and theories of history and literature. Vocabulary and tools necessary for reading and understanding contemporary critical and theoretical texts. One course. *Staff*

97. Introduction to Comparative Literature. (AL) An introduction to the discipline of comparative literature. Comparison among national literatures, using both formal and

historical approaches. Texts in translation, although knowledge of at least one foreign language is desirable. One course. *Staff*

98. Introduction to the Study of Literature and Society. (AL) Literature in relation to history, social situation, and culture. Development of modes of interpretation that juxtapose textual features and broader contextual concern. Readings from Western and non-Western sources representative of a number of periods and genres. C-L: Comparative Area Studies. One course. *Lentricchia or Willis*

99. Great Books in the Western Tradition. (AL) A group of texts central to Western cultural identity from antiquity to the modern age, examined from a variety of critical and theoretical perspectives. Texts and topics vary according to the specializations of participating faculty, but in every case attention is given to such fundamental issues as the representation of "human nature;" the relations of individual and society, human and divine, male and female; the transmission and interrogation of ideas and values in literature; and the function of narrative itself in Western culture. One course. *Burian, Janan, or Morton*

100. Introduction to Cultural Studies. (AL) See C-L: English 101B; also C-L: Film and Video. One course. *Gaines, Radway, Surin, Tompkins, Torgoornick, or Willis*

110. Introduction to Film. (AL) See C-L: English 101A; also C-L: Drama 173 and Film and Video. One course. *Gaines*

111S. Special Topics in Advanced Film, Video, or Audio Production. (AL) Also offered as Film and Video 101S. Prerequisite: Drama 173, English 101A, or Literature 110. One course. *Staff*

112. Special Topics in National Cinema. (AL) Understanding nationhood through film culture. Industrial base, reception history, and critical context for development of national cinemas. Exemplary films from a range of periods. C-L: Film and Video. One course. *Staff*

113. Studies in Comparative World Cinema. (AL) History and theory of film and video technology across nations; postcolonial patterns and their electronic and mechanical transmission; economics of distribution, reception, exhibition, and their relation to aesthetics. The first world defined against the second and third by means of cultural product. C-L: English 122, Film and Video, German 113, and Russian 113. One course. *Staff*

114. Film Theory. (AL) Recent critical developments in Marxist aesthetics, structuralism, semiotics of the image, feminist film theory. Both experimental and Hollywood narrative films. C-L: Film and Video and Women's Studies. One course. *Gaines*

115. Sexualities in Film and Video. (AL) The variety of ways sexualities are represented in current mainstream and avant-garde film and video art. Topics include voyeuristic, narcissistic, and other perverse pleasures; modes of representing bodies, genders, and desires (especially gay and lesbian ones) in relation to national and subcultural identities. Readings in film theory as well as related literary and critical texts. C-L: English 124, Film and Video, and Study of Sexualities. One course. *Clum, Gaines, or Moon*

116. Studies in Film History. (AL) See C-L: English 185; also C-L: Drama 174 and Film and Video. One course. *Clum, Gaines, or Jameson*

117. Documentary Film History. (AL, CZ) See C-L: History 150A; also C-L: Film and Video and Political Science 198. One course. *Gaines, Paletz, and Wood*

118. Experimental Film and Video. (AL) Historical overview of European and American movements from surrealism and Dada to the present; parallels between cinema and significant schools in the other arts. Special attention to the relationship between form and technological changes in the camera; the conditions of reception, from public film exhibition to home video intimacy. C-L: Film and Video. One course. *Staff*

- 119. Television, Technology, and Culture. (AL)** Prerequisite: Drama 173, English 101A, or Literature 114. See C-L: English 190; also C-L: Film and Video. One course. *Gaines*
- 120. Special Topics in Television Genres. (AL)** Close study of one or more mainstream television genres, such as the sit com, soap opera serial, cop show, game show, network news show, or the "made for TV" movie. C-L: Film and Video. One course. *Staff*
- 121. Special Topics in Women in Literature. (AL)** Literary and/or theoretical approaches to questions concerning the representation of women and/or femininity in literature. One course. *Staff*
- 123. Special Topics in Women Writers. (AL)** Issues of gender and representation in works by women from the Middle Ages to the modern period. Concentration on specific periods, areas, or themes. Relationship of women's literature to the other arts, political practices, and social developments. C-L: Women's Studies. One course. *Staff*
- 124. Special Topics in Homosexualities in Literature. (AL)** Readings from the theoretical and literary traditions constructing and commenting on gay, lesbian, bi, queer, and transgendered sexualities. C-L: Study of Sexualities. One course. *Staff*
- 125. Special Topics in Gender and Sexuality. (AL)** Different literary and/or theoretical approaches to questions of sex, gender, and sexuality. C-L: Study of Sexualities. One course. *Staff*
- 131. Special Topics in Culture and the Arts. (AL)** Literature in relation to the plastic and visual arts, architecture, and photography. Topics will vary according to the instructor, for example: modernism and postmodernism, the avant-garde, identity, and nationalism in the art of a given period. One course. *Staff*
- 132. Special Topics in the Study of Literature in Relation to Other Disciplines. (AL)** A comparative approach to the study of literature that draws on the methods and materials of other disciplines, such as sociology, history, anthropology, or philosophy. Focus on the methods of interdisciplinary study. Contents vary with instructors. One course. *Staff*
- 140. History of Mass Culture in the United States. (AL)** See C-L: English 156. One course. *Gaines, Radway, Tompkins, Torgovnick, or Willis*
- 141. International Popular Culture. (AL)** Basic concepts in critical theory; folk vs. mass culture, appropriation, resistance, hegemony, as studied through Japanese, Chinese, Australian, British, East Indian, and Latin American popular forms. American imperialism and the exportation of mass forms juxtaposed with international reception of popular fiction, characters, music, and television programs. C-L: Comparative Area Studies and Film and Video. One course. *C. Davidson, Gaines, Radway, or Willis*
- 142S. Documentary Fictions. (AL)** The study of different documentary forms such as fiction, nonfiction, video, and film, focusing on the way that historical and political contexts relate to them. Examples include Don DeLillo, Marcel Ophuls, Joyce Carol Oates, and Christa Wolf. Open to juniors and seniors only. One course. *Kaplan and Orr*
- 144S. Special Topics in Literature and Revolution. (AL)** The relation of literature to revolutionary movements and situations, such as the May Fourth period in China or the May 1968 uprisings in France. Focus also on the role of intellectuals and artists in political and social struggles. Contents vary with instructors. C-L: Comparative Area Studies. One course. *Staff*
- 145. Science, Technology, and Culture. (AL)** Approaches to the question of science and technology in a cultural context. Readings by scientists and scholars of science and society. One course. *Staff*

150. Special Topics in Literary Movements. (AL) Historical, theoretical, and/or formal approaches to literary movements in different periods and cultures. One course. *Staff*

151. Special Topics in Literary Genres. (AL) Studies in one or more literary genres or subgenres, such as the novel, drama, poetry, or the documentary novel, epic poetry, love lyrics, modernist drama, and so on. Focus on questions of genre and form, but other themes discussed may vary widely. One course. *Staff*

152. Special Topics in Drama, Poetry, and the Novel. (AL) One course. *Staff*

154. Special Topics in Individual Authors. (AL) Biographic, historical, and/or stylistic approaches to one or two individual authors, as well as critical debates concerning their work. One course. *Staff*

161. Special Topics in Third World or Postcolonial Literature and Cultures. (AL) Colonial and postcolonial literatures of India, New Zealand and Australia, Canada, Francophone and Anglophone Africa, the Caribbean, North and South America. Organized according to trends, topics, and genres. C-L: Comparative Area Studies. One course. *A. Davidson, Ferraro, Moses, or Willis*

162. Special Topics in Literature and National Cultures, Ethnicity, Race. (AL) Literature as a part of specific national cultures; questions such as: How does literature articulate conceptions of nationality, ethnicity, and race? Does literature have a color? What is the relationship between national languages, dialects, and ethnic languages? What role does literature as an institution play in the constructions of nationhood? C-L: Comparative Area Studies. One course. *Staff*

163. The Canadian Image: Cultural Production in French and English Canada. (AL) What image do Canadians generate of themselves and the world and why? Popular and experimental work in English and French Canadian arts—primarily film and literature, but some painting and music—studied for their meaning in the making or unmaking of a social and political identity and a national image, from the 1960s to the present. C-L: Canadian Studies, Comparative Area Studies, and Film and Video. One course. *A. Davidson*

181. Marxism and Society. (SS) See C-L: Cultural Anthropology 139; also C-L: Comparative Area Studies, Education 139, History 186, and Sociology 139. One course. *Staff*

182. Special Topics in Theory. (AL) An advanced investigation of major concepts and principles in literary and/or cultural theory. Contents and methods vary with instructors. One course. *Staff*

190S. Senior Seminar. (AL) Topics vary each semester offered. One course. *Staff*

195. Special Topics in World Media. (AL) Studies in the media and society in a national or international setting; offered only in a Duke study abroad program. One course. *Staff*

196. Special Topics in World Literature and Culture. (AL) Studies in literature and culture in a national or comparatist mode; offered only in a Duke study abroad program. One course. *Staff*

197S. Special Topics in the United States Culture Industries. (AL) Critical and historical readings in the culture of art and entertainment in the United States, consideration of the popular and the elite. Overview of high art institutions—museums and theaters—as well as the music, television, and film industries. Consideration of audiences, aesthetics, taste cultures. Readings in entertainment law, corporate history, and regional culture. Open only to students in the Duke in Los Angeles Program. C-L: Film and Video. One course. *Staff*

199. Independent Study. Consent of instructor required. One course. *Staff*

200S. Seminar in Asian and African Cultural Studies. (CZ) See C-L: Asian and African Languages and Literature 200S; also C-L: African and African-American Studies 200S and Cultural Anthropology 288S. One course. *Ching*

211. Theory and Practice of Literary Translation. (AL) Linguistic foundations and historical role of translation. Practical exercises and translation assignments. Prerequisites: working knowledge of a foreign language and consent of instructor. One course. *Burian*

212. Studies in Narrative. (AL) Topics to vary. One course. *Staff*

214. Gender, Nationalities, and Russian Literary Traditions. (AL, CZ) See C-L: Russian 214; also C-L: Women's Studies. One course. *Gheith*

279. The Bestseller: Cultural Populism in the 1990s' China. (AL) See C-L: Asian and African Languages and Literature 259; also C-L: Cultural Anthropology 263. One course. *Wang*

293. Special Topics in Literature and History. (AL, CZ) Relationship of literary texts to varieties of historical experience such as wars, periods of revolutionary upheaval, periods of intense economic growth, "times of troubles," or stagnation. Literary texts and historical content posed in such formal ways as the theoretical problem of the relationship between literary expression and form and a range of historical forces and phenomena. One course. *Jameson, Kaplan, or Orr*

COURSES CURRENTLY UNSCHEDULED

122. Feminism in Twentieth-Century Art. (AL)

254. Introduction to Feminism. (AL)

280. Semiotics for Literature. (AL)

THE MAJOR

All students must be able to demonstrate reading knowledge of at least one foreign language either through advanced placement or completion of the appropriate course work. In addition, literature students will be asked to fulfill the requirements in one of two tracks. When students declare the literature major, they will be asked to inform the director of undergraduate studies of the track selected and to work out a tentative course of study.

(1) Literature and Cultural Theory

This track has been designed to enable students to concentrate their efforts upon a comparative study of world literatures. It is understood that the director of undergraduate studies will encourage majors in this track to develop a coherent rationale for the kind of comparisons they are undertaking (for example, of specific national literatures, within a particular historical period) and will ensure that students take an appropriate number of more theoretical courses as well. Students will be required to take a total of ten courses, eight of which must be at the 100 level or above; the ten courses will be distributed in the following manner:

a. *One* course (appropriate to the student's particular interests) which engages the idea of literature from a theoretical, procedural, or comparative perspective. Students should choose from among those numbered 90 through 100, inclusive.

b. *Seven* courses in the Program in Literature to be approved by the director of undergraduate studies.

Students who are not completing honors in the program must plan to include at least one seminar course among these seven. This requirement will normally be fulfilled by taking Literature 190, the senior seminar. The seminar will be a topical, problem-oriented seminar focused on a broad subject such as society and psychoanalysis. The point of the course will be to raise theoretical questions and to enable the students to think more

systematically about the procedures, rationale, and methods of literary study. Nonhonors students will be asked to submit a substantial research paper at the end of the course.

Honors students will be asked to include two seminar courses among their seven. Honors candidates will take the senior seminar in both the fall and spring semesters to complete a year-long thesis project. Students must apply for this honors sequence by February 15 of the junior year. Applicants must have completed at least two Literature Program courses and one course in the literature of a foreign language and have a minimum B+ average in those courses. Applicants should apply to the director of undergraduate studies and must include a writing sample, a letter from one of their instructors, and the name of a thesis advisor, who will coordinate the evaluation of the thesis. The Literature Program's honors committee will evaluate all applications and the final theses themselves. Students not awarded the honors designation will receive graded credit for Literature 190.

c. *Two* courses in literature taught in a foreign language. The topics, periods, and foci of these courses should intersect in some way with the courses elected from within the Literature Program.

(2) Literature and Media Studies

This track has been designed to meet the needs of the many students who wish to elect a literature major but who want to concentrate more specifically upon the contemporary media and their attendant technologies. Students will be asked to develop a rationale for their course selection and to demonstrate to the director of undergraduate studies that they have addressed both theoretical and substantive questions in the courses they have taken. Students will be required to take a total of ten courses, eight of which must be at the 100 level or above; the ten courses will be distributed in the following manner:

a. Literature 100, Introduction to Cultural Studies.

b. *Five* courses in the Program in Literature. Non-honors students must include one seminar course among these five. This requirement will normally be fulfilled by Literature 190, the senior seminar. Honors students must include two seminar courses among these five. This requirement will be fulfilled by taking two semesters of Literature 190, the year-long thesis project. For honors procedures, see listing under Track (1).

c. *Two* courses in literature from the following list: any course numbered 110 through 120, and 140.

d. *One* course from outside the Literature Program in the area of media studies (for example, English 187, Cultural Anthropology 110, Public Policy Studies 163S, Public Policy Studies 177S, Public Policy Studies 180S). This course must be approved by the director of undergraduate studies.

e. *One* literature course in a foreign language at the 100 level or above.

Management Sciences Courses (MS)

The courses listed below are elective courses, which do not count for area of knowledge requirements in Trinity College. Neither a major nor a minor is offered in management sciences. The courses may be helpful in preparation for graduate education in business and law and may provide liberal arts, science, and engineering students an advancement in placement. For courses in accounting, see Economics.

120. Managerial Effectiveness. Understanding the nature of management and the factors that influence the effective performance of managers. Topics include the nature of managerial effectiveness; managing groups; leadership strategies; performance motivation and appraisal; conflict management; the manager as decision maker and negotiator. Prerequisite: junior standing. One course. *Staff*

161. Marketing Management. The role of the marketing function in business; product planning, price, promotion, and distribution as elements of a total marketing mix. Formal models in solving the marketing mix problem of the firm. Prerequisite: junior standing. One course. *Staff*

193, 194. Independent Study. Directed reading and research. Open only to qualified juniors and seniors with consent of instructor and director of undergraduate studies. Variable credit. *Staff*

Marine Biology

For courses in marine biology, see Biology, Environment (School), and the University Program in Marine Sciences.

University Program in Marine Sciences

Professor Ramus (botany and environment), *Director*; Professor Forward (zoology and environment), *Assistant Director and Director of Undergraduate Studies*; Professors Barber (botany, environment, geology, and zoology), C. Bonaventura (cell biology and environment), J. Bonaventura (cell biology and environment), Crowder (environment), Pilkey* (geology); Associate Professor Rittschof (zoology and environment); Assistant Professor Lozier (environment, geology, and mechanical engineering and materials science); Professor Emeritus Bookhout (zoology); Professor of the Practice Orbach (environment); Associate Professor of the Practice Kirby-Smith (environment); Assistant Professor of the Practice Read (environment); Assistant Research Professor McClellan-Green (environment)

The interdisciplinary program in marine sciences provides students with a unique opportunity to live and study at the Duke University Nicholas School of the Environment Marine Laboratory for a full academic semester fall or spring or during the summer terms. The program emphasizes small class size, independent study, and integrated classroom, laboratory, and field experience. Students have daily access to modern scientific equipment, a specialized library, and the surrounding natural marine environment.

The fall and spring semesters are offered primarily for juniors and seniors. Participation in either the fall or spring semester is possible for all majors with appropriate preparation. Before attending a semester program, it is advised that students have completed introductory college courses in biology, chemistry, and mathematics. Students wishing to apply to the fall or the spring semester must submit an application form to the Admissions Office, Duke University Nicholas School of the Environment, Marine Laboratory, 135 Duke Marine Lab Road, Beaufort, North Carolina 28516-9721, prior to Duke's registration period for the desired semester. Students will be notified of the action of the Admissions Committee shortly after receipt of their application. Applications received after Duke's registration period for the desired semester will be considered if space is available.

The summer curriculum, taught in two terms, includes a rich assortment of courses in the natural sciences. Attention is also directed to the introductory course in marine biology (Biology 10L), designed specifically for students not majoring in a natural science. Applications for summer courses must be accompanied by a current academic transcript and should be submitted by the end of March or earlier to the address indicated above. Thereafter, applications will be considered if space is available.

A number of summer tuition scholarships are available on a competitive basis. Please consult the Marine Laboratory 1997-98 Bulletin for specific requirements and deadline dates, or contact the admissions office of the Marine Laboratory.

THE BEAUFORT TO BERMUDA SEMESTER

The Marine Laboratory of the Nicholas School of the Environment (Beaufort, North Carolina) in cooperation with the Bermuda Biological Station for Research (Ferry Reach, Bermuda) offers a one-semester international study in environmental science and policy at two distinctive locations: Beaufort on the North Carolina coastal plain with its marshlands, estuaries, continental shelf, and the Gulf Stream; Bermuda with its intertidal coral reefs and

*Spring only.

subtropical mid-ocean environment in the Sargasso Sea. Emphasis is placed on the rigorous application of the natural and social sciences to the contrasting marine ecosystems and to basic processes and human interventions in the different oceanic systems. The program draws from two marine laboratory traditions in experiential learning for undergraduates and from the expertise of two resident faculties.

The program is open only to undergraduates in their third or fourth year of study and only to those with adequate preparation in the natural and social sciences. Students will reside at each campus for one-half semester. During the compressed seven-week session, they will take two intensive courses, selected from among five courses offered at each campus. One group will begin the program in Beaufort, the other in Bermuda. At mid-semester, the groups will trade campuses. Enrollment is limited. Early application is strongly recommended. Further information may be obtained from the admissions office at Beaufort (919-504-7502).

FALL, SPRING, OR SUMMER COURSES AT BEAUFORT

The courses below are described in the bulletin listings of the specified departments. See also the Marine Laboratory 1997-98 Bulletin and the Duke University Official Schedule of Courses for the current schedule of courses. For information on courses fulfilling requirements of the biology, environmental studies and policy, or geology major consult the director of undergraduate studies for the major.

Marine Biology. (Biology 10L.) For students not majoring in a natural science. One course. *Kenney*

Biological Oceanography. (Biology 114L.) (Given in Beaufort and Bermuda.) Prerequisite: Biology 25L. One course (spring); one and one-half courses (summer). *Barber or Ramus (Beaufort); Nelson and Steinberg (Bermuda)*

Analysis of Ocean Ecosystems. (Biology 123.) Prerequisite: one year of biology and chemistry, or consent of instructor. One course. *Barber*

Marine Mammals. (Biology 126.) Prerequisite: introductory biology. One course. *Read or staff*

Marine Mammals. (Biology 126L.) Laboratory version of Biology 126. Prerequisite: introductory biology. One course. *Read or staff*

Marine Ecology. (Biology 129L.) Prerequisite: none; suggested introductory ecology, invertebrate zoology, or marine botany. One course (fall or spring), one and one-half courses (summer). *Crowder*

Tropical Marine Invertebrates. (Biology 130L or Environment 130L.) (Given in Bermuda.) Prerequisite: introductory biology. One course. *Coates*

Tropical Marine Ecology. (Biology 131L or Environment 131L.) (Given in Bermuda.) Prerequisite: introductory biology. One course. *Lipschultz, McKenna, and Smith*

Physiology of Marine Animals. (Biology 150L.) Prerequisites: Biology 25L; and chemistry. One course (fall or spring); one and one-half courses (summer). *Forward*

Biochemistry of Marine Animals. (Biology 155L.) Prerequisites: Biology 25L; and Chemistry 11L, 12L. One course (fall or spring); one and one-half courses (summer). *Rittschof*

Marine Invertebrate Zoology. (Biology 176L.) Not open to students who have taken Biology or Zoology 274L. Prerequisite: Biology 25L. One course (fall or spring); one and one-half courses (summer). *Kirby-Smith*

Independent Study. (Biology 191, 192; Cell Biology 210; Environment 191, 192; Geology 191, 192, 195; or as listed under the student's major department.) For junior and senior majors with consent of appropriate director of undergraduate studies and supervising instructor. Credit to be arranged. *Staff*

Tutorial. (Biology 193T, 194T.) For junior and senior majors with consent of director of undergraduate studies and supervising instructor. Three courses of 191, 192, 193T, and 194T, maximum. Variable credit. *Staff*

Barrier Island Ecology. (Biology 218L or Environment 218L.) Prerequisite: introductory biology; suggested: course in botany or ecology. One and one-half courses. *Evans, Peterson, and Wells (visiting summer faculty)*

Light in the Sea. (Biology 295S or Biology 296S.) Half course. *Ramus*

Human Impact on the Natural Environment. (Biology 295S or Biology 296S.) Half course. *Barber*

Marine Animal Navigation. (Biology 295S or Biology 296S.) Half course. *Forward*

The Ecology of Chemical Signals. (Biology 295S or 296S.) Half course. *Rittschof*

Environmental Biochemistry. (Cell Biology 243 or Environment 243.) Prerequisite: organic chemistry. One course. *C. Bonaventura*

Cellular and Molecular Research Techniques. (Cell Biology 244L or Environment 244L.) Prerequisite: organic chemistry. One course. *C. Bonaventura and McClellan-Green*

Climate Change: A Global Perspective. (Environment 121.) (Given in Bermuda.) One course. *Malmquist*

Climate Related Hazards and Humanity (Environment 122S.) (Given in Bermuda.) Half course. *Malmquist*

Remote Sensing and Long-term Environmental Monitoring. (Environment 125.) (Given in Bermuda.) One course. *Nelson*

Current Topics in Oceanography and Marine Biology. (Environment 132S.) (Given in Bermuda.) Prerequisite: introductory biology. Half course. *Lipschultz and Nelson*

Molecular Approaches to Questions of Physiology, Ecology and Evolution in the Marine Environment. (Environment 133S.) (Given in Bermuda.) Prerequisite: introductory biology. Half course. *Trapido-Rosenthal*

Marine Biogeochemistry. (Environment 134L.) (Given in Bermuda.) Prerequisite: introductory biology and introductory chemistry. One course. *Bates and Carlson*

Estuarine Ecosystem Processes. (Environment 208L.) Prerequisite: ecology, systematics, or field biology course or consent of instructor. One course. *Kirby-Smith*

Coastal Ecotoxicology and Pollution. (Environment 225L.) Prerequisites: introductory chemistry and biology. One course. *Kenney*

Seminar in Ocean Sciences. (Environment 256S.) Consent of instructor required. Half course. *Staff*

Advanced Topics in Marine Ecology. (Environment 269S.) Half course. *Crowder*

Marine Fisheries Policy. (Environment 273.) One course. *Orbach*

Marine Policy. (Environment 276 or Public Policy Studies 197.) Consent of instructor required. One course. *Orbach*

Geological Oceanography. (Environment 291 or Geology 205.) Not open to students who have taken Geology 206S. One course. *Staff*

Beach and Island Geological Processes. (Geology 202) Half course. *Pilkey*

COURSES CURRENTLY UNSCHEDULED

Behavioral Ecology (Biology 113L)

Biology of Marine Invertebrates. (Biology 274L or Environment 297L.)

Physical Processes in Coastal Environments. (Environment 222L or Geology 201L.)

Statistics and Data Analysis in Earth and Ocean Science. (Environment 252L or Geology 222L.)

Advanced Topics in Nearshore Processes. (Environment 268 or Geology 204.)

The Oxygen Paradox: An Essential Environmental Pollutant. (Environment 298.)

Markets and Management Studies

Professor Spenner, *Director*

A certificate, but not a major, is available in this program.

The program offers students the opportunity to take a cluster of courses dealing with problems of how organizations are formed and managed, how transactions between people and organizations are structured in markets, how and why patterns of consumption change, what distinguishes good from bad management in both the practical and ethical sense, how approaches to management and marketing have changed over time, and how these approaches vary from one country and one sector of the economy to another. The program is designed to meet the needs of Duke undergraduates who wish to combine their current course of study with preparation for careers in business and management, or related graduate study.

In addition to offering courses and a certificate on completion of the requirements, the Markets and Management Studies Program also sponsors lectures, films, discussions and

internships. Students are invited to make use of a resource room (Room 256 in the Sociology-Psychology Building) for meetings with faculty and other students in the program, and to consult relevant journals and newspapers. Additional information may be obtained from Professor Spenner or the program coordinator in the sociology department.

COURSE OF STUDY

The course of study for program participants is intended to be interdisciplinary. The core of the program consists of sociology courses, with a large number of electives available for selection from eight other departments. The certificate requires six courses, two of which must be drawn from a core set of management and markets studies courses. The third core course is the capstone course, an integrative course taken in the senior year. The rest of the courses are considered electives, and at least two of these must be taken in departments other than sociology.

PROGRAM COURSES

Core Courses

Sociology 142. Organizations and Global Competitiveness
Sociology 144. Organizations and Environments
Sociology 155. Organizations and Management
Sociology 158. Markets and Marketing
Sociology 159. The Sociology of Entrepreneurship
Sociology 190. Markets and Management (capstone course)

Elective Courses

Cultural Anthropology 110. Advertising and Society: Global Perspective
Economics 130. The Changing Role of the Market in the Social System
Economics 134. Japanese Economy and Its History
Economics 140. Comparative Economic Systems
Economics 142S. Chinese Economy in Transition
Economics 165. American International Economic Policy
Economics 173. Economics of Organization and Management
Economics 181. Corporate Finance
Economics 183. Agency and Accounting
Economics 188. Industrial Organization
Economics 189. Business and Government
Education 140. The Psychology of Work
Engineering 171. Total Quality Systems
History 143B. The Emergence of Modern Japan
Management Science 120. Managerial Effectiveness
Management Science 161. Marketing Management
Political Science 113A. Issues of International Political Economy I: International Trade
Political Science 164. Political Organizations
Public Policy Studies 138S. Public-Private Leadership
Public Policy Studies 139S. Business Leadership
Public Policy Studies 145D. Leadership, Policy, and Change
Public Policy Studies 146. Leadership Development
Religion 181. Ethical Issues in Social Change and Public Policy
Science, Technology and Human Values 112S, 113S. Topics in Science, Technology, and Human Values
Sociology 110B.01. Comparative Sociology: Asia
Sociology 112. American Demographics
Sociology 126. Third World Development
Sociology 141. Consuming Passions
Sociology 143. Management and Labor Relations
Sociology 145. Nations, Regions, and the Global Economy
Sociology 146. Organizational and Occupational Deviance
Sociology 156. Global Contexts of Science and Technology
Sociology 165. Occupations, Professions, and Careers
Sociology 191-192. Markets and Management Studies Internship

Mathematics (MTH)

Professor Harer, *Chair*; Professor Pardon, *Associate Chair*; Associate Professor Layton, *Director of Undergraduate Studies*; Assistant Professor of the Practice Blake, *Supervisor of First-Year Instruction*; Professors Allard, Beale, Bryant, Hain, Lawler, Morrison, M. Reed, Rose, Schaeffer, Stern, Trangenstein, Venakides, and Weisfeld; Associate Professors Bertozzi, Burdick, R. Hodel, Kitchen, Kraines, Moore, Saper, Schoen, Scoville, Smith, and Zhou; Assistant Professors Aspinwall, Plesser, and Yang; Professors Emeriti Carlitz, Roberts, Shoenfield, and Warner; Assistant Professor of the Practice Bookman; Research Assistant Professors Constantinescu, Hayes, and D. Reed; Adjunct Professors Chandra and Shearer; Lecturers Coyle, Dempster, M. Hodel, Morris, and Tomberg

A major or minor is available in this department.

19. Precalculus Mathematics. (QR) For students with CB Achievement Test scores between 460 and 540 or SAT scores between 500 and 600. Selected topics in algebra, trigonometry, and analytic geometry; projects and writing assignments. Designed to increase the mathematical skills and knowledge of students planning to enroll in Mathematics 31. Not open to students who have credit for Mathematics 25L or 26L. One course. *Staff*

25L. Laboratory Calculus and Functions I. (QR) A study of functions with applications, and an introduction to differential calculus, with a laboratory component. Topics include a review of algebra and functions, mathematical modeling with elementary functions, rates of change, inverse functions, logarithms and exponential functions, the derivative, differential equations, and Euler's method. Not open to students who have credit for Mathematics 19 or 31 or 31L. One course. *Staff*

26L. Laboratory Calculus and Functions II. (QR) A continuation of Mathematics 25L. Topics include graphical interpretations of the derivative, zeroes of functions, optimization, related rates, antidifferentiation, initial value problems, review of trigonometry, modeling with trigonometric functions, geometric sums and series, and the Fundamental Theorem of Calculus. Students who complete this course can enroll in Mathematics 32L. Not open to students who have credit for Mathematics 31 or 31L. Prerequisite: Mathematics 25L. One course. *Staff*

31. Introductory Calculus I. (QR) Functions, limits, continuity, trigonometric functions, techniques and applications of differentiation, indefinite and definite integrals, the fundamental theorem. One course. *Staff*

31L. Laboratory Calculus I. (QR) Introductory calculus with a computer laboratory component. Emphasis on projects, group work, and written reports. Differentiation, transcendental functions, differential equations, numerical approximations. Not open to students who have credit for Mathematics 25L or 26L. One course. *Staff*

32. Introductory Calculus II. (QR) Transcendental functions, techniques and applications of integration, indeterminate forms, improper integrals, infinite series. Not open to students who have had Mathematics 32L or 41. Prerequisite: Mathematics 31. One course. *Staff*

32L. Laboratory Calculus II. (QR) Second semester of introductory calculus with a computer laboratory. Emphasis on projects, group work, and written reports. Integration, the fundamental theorem, methods of integration, improper integrals, polynomial approximation. Not open to students who have had Mathematics 32 or 41. Prerequisite: Mathematics 26L or 31L or consent of instructor. One course. *Staff*

32X. Introductory Honors Calculus II. (QR) Similar to Mathematics 32, but faster paced and more challenging. Open to students who score at least 750 on the SAT Mathematics Aptitude Test. One course. *Staff*

41. One Variable Calculus. (QR) Meets five times a week, quickly reviews differential calculus and then covers integral calculus and infinite series. Designed for first-year students who have had a year of calculus in high school and have Mathematics SAT scores of 650 or above, but who have not received advanced placement credit for Mathematics 31. Not open to students who have had Mathematics 32 or 32L. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

103. Intermediate Calculus. (QR) Partial differentiation, multiple integrals, and topics in differential and integral vector calculus, including Green's theorem, the divergence theorem, and Stokes's theorem. Prerequisite: Mathematics 32, 32L, or 41. One course. *Staff*

103L. Laboratory Calculus III. (QR) Intermediate calculus with a computer laboratory. Emphasis on projects, group work, and written reports. Curves in space, partial differentiation, multiple integrals, two-dimensional vector calculus. Prerequisite: Mathematics 32, 32L, or 41, or consent of instructor. One course. *Staff*

103X, 104X. Honors Intermediate Calculus and Linear Algebra. (QR) Similar to Mathematics 103, 104, but more theoretical. Students who have taken 32X are encouraged to enroll. Students continuing from 103X should take 104X rather than 104. One course each. *Staff*

104. Linear Algebra and Applications. (QR) Systems of linear equations and elementary row operations, Euclidean n -space and subspaces, linear transformations and matrix representations, Gram-Schmidt orthogonalization process, determinants, eigenvectors and eigenvalues; applications. Prerequisite: Mathematics 32, 32L, or 41. One course. *Staff*

111. Applied Mathematical Analysis I. (QR) First and second order differential equations with applications; matrices, eigenvalues, and eigenvectors; linear systems of differential equations; Fourier series and applications to partial differential equations. Intended primarily for engineering and science students with emphasis on problem solving. Not open to students who have had Mathematics 131. Prerequisite: Mathematics 103. One course. *Staff*

114. Applied Mathematical Analysis II. (QR) Boundary value problems, complex variables, Cauchy's theorem, residues, Fourier transform, applications to partial differential equations. Not open to students who have had Mathematics 133, 181, or 211. Prerequisites: Mathematics 111 or 131, or 103 and consent of instructor. One course. *Staff*

120S. Introduction to Theoretical Mathematics. (QR) Topics from set theory, number theory, algebra, and analysis. Recommended for prospective mathematics majors who feel the need to improve skills in logical reasoning and theorem-proving before taking Mathematics 121 and 139. Not open to students who have had Mathematics 121, Mathematics 139, or equivalents. Prerequisite: Mathematics 103; corequisite: Mathematics 104. Half course. *Staff*

121. Introduction to Abstract Algebra. (QR) Groups, rings, and fields. Students intending to take a year of abstract algebra should take Mathematics 200 and 201. Not open to students who have had Mathematics 200. Prerequisite: Mathematics 104 or 111. One course. *Staff*

123S. Geometry. (QR) Euclidean geometry, inverse and projective geometries, topology (Möbius strips, Klein bottle, projective space), and non-Euclidean geometries in two and three dimensions; contributions of Euclid, Gauss, Lobachevsky, Bolyai, Riemann, and Hilbert. Prerequisite: Mathematics 32, 32L, 41, or consent of instructor. One course. *Staff*

124. Combinatorics. (QR) Permutations and combinations, generating functions, recurrence relations; topics in enumeration theory, including the Principle of Inclusion-Exclusion and Polya Theory; topics in graph theory, including trees, circuits, and matrix repre-

sentations; applications. Prerequisite: Mathematics 104 or consent of instructor. One course. *Staff*

126. Introduction to Linear Programming and Game Theory. (QR) Fundamental properties of linear programs; linear inequalities and convex sets; primal simplex method, duality; integer programming; two-person and matrix games. Prerequisite: Mathematics 104. One course. *Staff*

128. Number Theory. (QR) Divisibility properties of integers, prime numbers, congruences, quadratic reciprocity, number-theoretic functions, simple continued fractions, rational approximations; contributions of Fermat, Euler, and Gauss. Prerequisite: Mathematics 32, 32L, 41, or consent of instructor. One course. *Staff*

128S. Number Theory. (QR) Same as Mathematics 128, but offered as a seminar. One course. *Staff*

131. Elementary Differential Equations. (QR) Solution of differential equations of elementary types; formation and integration of equations arising in applications. Not open to students who have had Mathematics 111. Prerequisite: Mathematics 103; corequisite: Mathematics 104. One course. *Staff*

132S. Nonlinear Ordinary Differential Equations. (QR) Theory and applications of systems of nonlinear ordinary differential equations. Topics may include qualitative behavior, numerical experiments, oscillations, bifurcations, deterministic chaos, fractal dimension of attracting sets, delay differential equations, and applications to the biological and physical sciences. Prerequisite: Mathematics 111 or 131 or consent of instructor. One course. *Staff*

133. Introduction to Partial Differential Equations. (QR) Heat, wave, and potential equations: scientific context, derivation, techniques of solution, and qualitative properties. Topics to include Fourier series and transforms, eigenvalue problems, maximum principles, Green's functions, and characteristics. Intended primarily for mathematics majors and those with similar backgrounds. Not open to students who have had Mathematics 114 or 211. Prerequisite: Mathematics 111 or 131 or consent of instructor. One course. *Staff*

135. Probability. (QR) Probability models, random variables with discrete and continuous distributions. Independence, joint distributions, conditional distributions. Expectations, functions of random variables, central limit theorem. Prerequisite: Mathematics 103. C-L: Statistics 104. One course. *Staff*

136. Statistics. (QR) Sampling distributions, point and interval estimation, maximum likelihood estimators. Tests of hypotheses, the Neyman-Pearson theorem. Bayesian methods. Not open to students who have had Statistics 112 or 213. Prerequisites: Mathematics 104 and 135. C-L: Statistics 114. One course. *Staff*

139. Advanced Calculus I. (QR) Algebraic and topological structure of the real number system; rigorous development of one-variable calculus including continuous, differentiable, and Riemann integrable functions and the Fundamental Theorem of Calculus; uniform convergence of a sequence of functions; contributions of Newton, Leibniz, Cauchy, Riemann, and Weierstrass. Not open to students who have had Mathematics 203. Prerequisite: Mathematics 103. One course. *Staff*

149S. Problem Solving Seminar. (QR) Techniques for attacking and solving challenging mathematics problems and writing mathematical proofs. Course may be repeated. Consent of instructor required. Half course. *Staff*

150. Topics in Mathematics from a Historical Perspective. (QR) Content of course determined by instructor. Prerequisite: Mathematics 139 or 203 or consent of instructor. One course. *Staff*

150S. Topics in Mathematics from a Historical Perspective. (QR) Same as Mathematics 150, but offered as a seminar. One course. *Staff*

160. Mathematical Numerical Analysis. (QR) Zeros of functions; polynomial interpolation and splines; numerical integration and differentiation; applications to ordinary differential equations; numerical linear algebra; error analysis; extrapolation and acceleration. Not open to students who have had Computer Science 150 or 250. Prerequisites: Mathematics 103 and 104 and knowledge of an algorithmic programming language, or consent of instructor. One course. *Staff*

160S. Mathematical Numerical Analysis. (QR) Same as Mathematics 160, but offered as a seminar. One course. *Staff*

181. Complex Analysis. (QR) Complex numbers, analytic functions, complex integration, Taylor and Laurent series, theory of residues, argument maximum principles, conformal mapping. Not open to students who have had Mathematics 114 or 212. Prerequisite: Mathematics 139 or 203. One course. *Staff*

187. Introduction to Mathematical Logic. (QR) Propositional calculus; predicate calculus. Gödel completeness theorem, applications of number theory, incompleteness theorem, additional topics in proof theory or computability; contributions of Aristotle, Boole, Frege, Hilbert, and Gödel. Prerequisites: Mathematics 103 and 104 or Philosophy 103. One course. *Staff*

188. Logic and Its Applications. (QR) Topics in proof theory, model theory, and recursion theory; applications to computer science, formal linguistics, mathematics, and philosophy. Usually taught jointly by faculty members from the departments of computer science, mathematics, and philosophy. Prerequisite: a course in logic or consent of instructor. C-L: Computer Science 148 and Philosophy 150. One course. *Staff*

191, 192. Independent Study. Directed reading and research. Admission by consent of instructor and director of undergraduate studies. One course each. *Staff*

193, 194. Independent Study. Same as 191, 192, but for seniors. One course each. *Staff*

196S. Seminar in Mathematical Modeling. (QR) Introduction to techniques used in the construction, analysis, and evaluation of mathematical models. Individual modeling projects in biology, chemistry, economics, engineering, medicine, or physics. Prerequisite: Mathematics 111 or 131 or consent of instructor. One course. *Staff*

197S. Seminar in Mathematics. (QR) Intended primarily for juniors and seniors majoring in mathematics. Topics vary. Prerequisites: Mathematics 103 and 104. One course. *Staff*

198S, 199S. Honors Seminar in Mathematics. (QR) Topics vary. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

For Seniors and Graduates

200. Introduction to Algebraic Structures I. (QR) Laws of composition, groups, rings; isomorphism theorems; axiomatic treatment of natural numbers; polynomial rings; division and Euclidean algorithms. Not open to students who have had Mathematics 121. Prerequisite: Mathematics 104 or equivalent. One course. *Staff*

201. Introduction to Algebraic Structures II. (QR) Vector spaces, matrices and linear transformations, fields, extensions of fields, construction of real numbers. Prerequisites: Mathematics 200, or Mathematics 121 and consent of instructor. One course. *Staff*

- 203. Basic Analysis I. (QR)** Topology of R^n , continuous functions, uniform convergence, compactness, infinite series, theory of differentiation, and integration. Not open to students who have had Mathematics 139. Prerequisite: Mathematics 104. One course. *Staff*
- 204. Basic Analysis II. (QR)** Inverse and implicit function theorems, differential forms, integrals on surfaces, Stokes' theorem. Not open to students who have had Mathematics 140. Prerequisites: Mathematics 203, or Mathematics 139 and consent of instructor. One course. *Staff*
- 205. Topology. (QR)** Elementary topology, surfaces, covering spaces, Euler characteristic, fundamental group, homology theory, exact sequences. Prerequisite: Mathematics 104. One course. *Staff*
- 206. Differential Geometry. (QR)** Geometry of curves and surfaces, the Serret-Frenet frame of a space curve, the Gauss curvature, Cadazzi-Mainardi equations, the Gauss-Bonnet formula. Prerequisite: Mathematics 104. One course. *Staff*
- 211. Mathematical Methods in Physics and Engineering I. (QR)** Heat and wave equations, initial and boundary value problems, Fourier series, Fourier transforms, potential theory. Not open to students who have had Mathematics 133 or 230. Prerequisite: Mathematics 114 or equivalent. One course. *Staff*
- 212. Mathematical Methods in Physics and Engineering II. (QR)** Green's functions, partial differential equations in several space dimensions. Complex variables, analytic functions, Cauchy's theorem, residues, contour integrals. Other topics may include method of characteristics, perturbation theory, calculus of variations, or stability of equilibria. Not open to students who have taken the former Mathematics 231. Prerequisite: Mathematics 114, 133, or 211. One course. *Staff*
- 216. Applied Stochastic Processes. (QR)** An introduction to stochastic processes without measure theory. Topics selected from: Markov chains in discrete and continuous time, queueing theory, branching processes, martingales, Brownian motion, stochastic calculus. Not open to students who have taken Mathematics 240. Prerequisite: Mathematics 135 or equivalent. C-L: Statistics 253. One course. *Staff*
- 217. Linear Models. (QR)** Corequisite: Statistics 213 or equivalent. See C-L: Statistics 244. One course. *Staff*
- 218. Introduction to Multivariate Statistics. (QR)** Not open to students who have taken the former Mathematics 242. Prerequisite: Statistics 244 or equivalent. See C-L: Statistics 245. One course. *Burdick*
- 221. Numerical Analysis. (QR)** Prerequisites: knowledge of an algorithmic programming language, intermediate calculus including some differential equations, and Mathematics 104. See C-L: Computer Science 250; also C-L: Statistics 273. One course. *Rose or Sun*
- 222. Numerical Methods for Partial Differential Equations. (QR)** Prerequisite: Computer Science 221 or 250. See C-L: Computer Science 252. One course. *Rose or Sun*
- 223. Numerical Linear Algebra. (QR)** Prerequisite: Computer Science 221 or 250 or equivalent. See C-L: Computer Science 254. One course. *Rose or Sun*
- 224. Scientific Computing I. (QR)** Well-posedness of ODEs; method, order, and stability. Methods for hyperbolic, parabolic, and elliptic PDEs. Structured programming and graphical user interfaces. Programming in C++, C, and Fortran. Prerequisites: Mathematics 103, plus some familiarity with ODEs and PDEs. One course. *Staff*
- 225. Scientific Computing II. (QR)** Compressible fluid flow. Shock-capturing methods for conservation laws. Incompressible fluid flow. Vortex and probabilistic methods for high

Re flow. Viscous Navier-Stokes equations and projection methods. Prerequisite: Mathematics 224. One course. *Staff*

226. Topics in Numerical Analysis. (QR) Numerical solution of ordinary or partial differential equations, unconstrained and constrained nonlinear optimization, finite element methods, computational methods for hyperbolic conservation laws. Prerequisite: Mathematics 221 or consent of instructor. One course. *Staff*

229. Mathematical Modeling. (QR) Formulation and analysis of mathematical models in science and engineering. Emphasis on case studies; may include individual or team research projects. One course. *Staff*

231. Ordinary Differential Equations. (QR) Existence and uniqueness theorems for nonlinear systems, well-posedness, two-point boundary value problems, phase plane diagrams, stability, dynamical systems, and strange attractors. Not open to students who have taken the former Mathematics 296. Prerequisites: Mathematics 104, 111 or 131, and 203 or 139. One course. *Staff*

232. Partial Differential Equations I. (QR) Fundamental solutions of linear partial differential equations, hyperbolic equations, characteristics, Cauchy-Kowalevski theorem, propagation of singularities. Not open to students who have taken the former Mathematics 297. Prerequisite: Mathematics 204 or equivalent. One course. *Staff*

233. Asymptotic and Perturbation Methods. (QR) Asymptotic solution of linear and nonlinear ordinary and partial differential equations. Asymptotic evaluation of integrals. Singular perturbation. Boundary layer theory. Multiple scale analysis. Prerequisite: Mathematics 114 or equivalent. One course. *Staff*

238, 239. Topics in Applied Mathematics. (QR) Conceptual basis of applied mathematics, graph theory, game theory, mathematical programming, numerical analysis, or problems drawn from industry or from academic science or engineering. Prerequisites: Mathematics 103 and 104 or equivalents. One course each. *Staff*

241. Real Analysis I. (QR) Measures; Lebesgue integral; L^p spaces; Daniell integral, differentiation theory, product measures. Not open to students who have taken the former Mathematics 281. Prerequisite: Mathematics 204 or equivalent. One course. *Staff*

242. Real Analysis II. (QR) Metric spaces, fixed point theorems, Baire category theorem, Banach spaces, fundamental theorems of functional analysis, Fourier transform. Not open to students who have taken the former Mathematics 282. Prerequisite: Mathematics 241 or equivalent. One course. *Staff*

245. Complex Analysis. (QR) Complex calculus, conformal mapping, Riemann mapping theorem, Riemann surfaces. Not open to students who have taken Mathematics 285. Prerequisite: Mathematics 204 or equivalent. One course. *Staff*

248. Topics in Analysis. (QR) Harmonic analysis, dynamical systems, geometric measure theory, or calculus of variations. Prerequisites: Mathematics 241 and 245 or equivalents. One course. *Staff*

249. Topics in Functional Analysis. (QR) Spectral analysis, operator algebras, nonlinear functional analysis, or structure theory of Banach spaces. Prerequisite: Mathematics 242 or equivalent. One course. *Staff*

251. Groups, Rings, and Fields. (QR) Groups including nilpotent and solvable groups, p -groups and Sylow theorems; rings and modules including classification of modules over a PID and applications to linear algebra; fields including extensions and Galois theory. Not open to students who have taken Mathematics 260. Prerequisite: Mathematics 201 or equivalent. One course. *Staff*

252. Commutative Algebra. (QR) Extension and contraction of ideals, modules of fractions, primary decomposition, integral dependence, chain conditions, affine algebraic varieties, Dedekind domains, completions. Not open to students who have taken the former Mathematics 261. Prerequisite: Mathematics 251 or equivalent. One course. *Staff*

254. Topics in Algebra. (QR) Algebraic number theory, algebraic K -theory, homological algebra, or other topics. Prerequisite: Mathematics 251. One course. *Staff*

257. Mathematical Logic. (QR) First-order logic, completeness theorem, compactness theorem, introduction to recursive functions, incompleteness theorem. Not open to students who have taken Mathematics 250. Prerequisite: Mathematics 187 or 200 or equivalent. One course. *Staff*

261. Algebraic Topology I. (QR) Fundamental group and covering spaces, singular and cellular homology, Eilenberg-Steenrod axioms of homology, Euler characteristic, classification of surfaces, singular and cellular cohomology. Not open to students who have taken Mathematics 271. Prerequisites: Mathematics 200 and 205 or consent of instructor. One course. *Staff*

262. Algebraic Topology II. (QR) Universal coefficient theorems, Künneth theorem, cup and cap products, Poincaré duality, plus topics selected from: higher homotopy groups, obstruction theory, Hurewicz and Whitehead theorems, and characteristic classes. Prerequisite: Mathematics 261 or consent of instructor. One course. *Staff*

263, 264. Topics in Topology. (QR) Algebraic, geometric, or differential topology. Consent of instructor required. One course each. *Staff*

267. Differential Geometry. (QR) Differentiable manifolds, fiber bundles, connections, curvature, characteristic classes, Riemannian geometry including submanifolds and variations of the length integral, complex manifolds, homogeneous spaces. Not open to students who have taken Mathematics 275. Prerequisites: Mathematics 204 and 251 or equivalents. One course. *Staff*

268. Topics in Differential Geometry. (QR) Lie groups and related topics, Hodge theory, index theory, minimal surfaces, Yang-Mills fields, exterior differential systems, several complex variables. Prerequisite: Mathematics 267 or consent of instructor. One course. *Staff*

273. Algebraic Geometry. (QR) Local theory: affine varieties, algebraic and topological theory of singularities. Global theory over the complex numbers: Riemann surfaces, Jacobians, Kähler manifolds, Hodge theory, theorems of Lefschetz and Kodaira. Prerequisite: Mathematics 252 or equivalent. One course. *Staff*

277. Topics in Algebraic Geometry. (QR) Projective varieties and the theory of extremal rays, classification of surfaces and higher-dimensional varieties, variation of Hodge structure and moduli problems, schemes and arithmetic varieties, or other advanced topics. Prerequisite: Mathematics 273 or consent of instructor. One course. *Staff*

278. Topics in Complex Analysis. (QR) Geometric function theory, function algebras, several complex variables, uniformization, or analytic number theory. Prerequisite: Mathematics 245 or equivalent. One course. *Staff*

279. Topics in Mathematical Physics. (QR) Topics selected from: critical phenomena and statistical mechanics, mathematical aspects of quantum field theory, string and superstring theories, or other areas of mathematical physics. One course. *Staff*

281. Partial Differential Equations II. (QR) Linear wave motion, dispersion, stationary phase, foundations of continuum mechanics, characteristics, linear hyperbolic systems, and nonlinear conservation laws. Not open to students who have taken the former Mathematics 298. Prerequisite: Mathematics 232 or equivalent. One course. *Staff*

282. Partial Differential Equations III. (QR) Fourier transforms, distributions, elliptic equations, singular integrals, layer potentials, Sobolev spaces, regularity of elliptic boundary value problems. Prerequisites: Mathematics 232 and 241 or equivalent. One course. *Staff*

283, 284. Topics in Partial Differential Equations. (QR) Hyperbolic conservation laws, pseudo-differential operators, variational inequalities, theoretical continuum mechanics. Prerequisite: Mathematics 281 or equivalent. One course each. *Staff*

287. Probability. (QR) Random variables, independence, expectations, laws of large numbers, central limit theorem, martingales, Brownian motion. Not open to students who have taken Mathematics 290. Prerequisite: Mathematics 241 or equivalent. C-L: Statistics 207. One course. *Staff*

288. Topics in Probability Theory. (QR) Brownian motion, diffusion processes, random walks, and applications to differential equations and mathematical physics. Prerequisite: Mathematics 287 or consent of instructor. C-L: Statistics 297. One course. *Staff*

295, 296. Special Topics. (QR) One course each. *Staff*

297, 298. Special Readings. (QR) One course each. *Staff*

COURSES CURRENTLY UNSCHEDULED

135S. Probability. (QR)

140. Advanced Calculus II. (QR)

140S. Advanced Calculus II. (QR)

171S. Elementary Topology. (QR)

THE MAJOR

The Department of Mathematics offers both the A.B. degree and the B.S. degree. Students who plan to attend graduate school in mathematics or the sciences should consider working toward the B.S. degree, which requires at least eight courses in mathematics numbered above Mathematics 111. The A.B. degree requires at least six and one-half courses in mathematics numbered above Mathematics 111. The specific requirements for each degree are listed below.

Mathematics 120S is a half-course recommended for prospective mathematics majors who feel the need to improve skills in logical reasoning and theorem-proving before taking Mathematics 121 and 139. Ideally, Mathematics 120S should be taken before the junior year and concurrently with Mathematics 103 or Mathematics 104. Students working toward the A.B. degree who do not take Mathematics 120S will usually fulfill their major requirements by taking at least seven full courses in mathematics numbered above Mathematics 111.

The director of undergraduate studies can be consulted for additional information and advice on course selection. The *Handbook for Mathematics Majors and Minors*, published by the department, can be used as a guide in developing a coherent program of study consistent with professional goals.

For the A.B. Degree

Prerequisites. Mathematics 31 or 31L or an equivalent course (Advanced Placement allowed); Mathematics 32 or 32L or 41 or an equivalent course (Advanced Placement allowed); Mathematics 103 and Mathematics 104 or equivalent courses. (Many upper-level mathematics courses assume programming experience at the level of Computer Science 4. Students without computer experience are encouraged to take Computer Science 6.)

Major Requirements. Six and one-half courses in mathematics numbered above 111 including Mathematics 121 or 200 and Mathematics 139 or 203.

For the B.S. Degree

Prerequisites. Mathematics 31 or 31L or an equivalent course (Advanced Placement allowed); Mathematics 32 or 32L or 41 or an equivalent course (Advanced Placement allowed); Mathematics 103 and Mathematics 104 or equivalent courses. (Many upper-level mathematics courses assume programming experience at the level of Computer Science 4. Students without computer experience are encouraged to take Computer Science 6.)

Major Requirements. Eight courses in mathematics numbered above 111 including: Mathematics 121 or 200; Mathematics 139 or 203; and one of Mathematics 136, 181, 201, 204, 205, 206. Also, Physics 41L, 42L or Physics 51L, 52L or Physics 53L, 54L.

Honors/Distinction

The department offers a program for graduation with distinction in mathematics. See the *Handbook for Mathematics Majors and Minors* and also the section on honors in this bulletin.

THE MINOR

Prerequisites. Mathematics 103 or equivalent.

Requirements. Five courses as follows: either Mathematics 104 or 111, but not both; four additional courses in mathematics numbered above 111, to include at least one course (or its equivalent) from the following: Mathematics 121, 132S, 135, 139, 160, 181, 187, or any 200-level course.

Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates

Qualified students in arts and sciences may select courses from the following offered by the graduate departments associated with the School of Medicine. A major is not offered to undergraduates in any of the departments listed below; nor do the courses count toward area of knowledge requirements. For permission to register for these courses and for further information, see Professors Greenleaf (biochemistry), Padilla (cell biology), Dawson (immunology), Pickup (microbiology), W. C. Hall (neurobiology), Hale (pathology), or Schwartz (pharmacology). The 200-level courses below are described in the *Bulletin of Duke University: Graduate School*.

BIOCHEMISTRY (BCH)

209, 210. Independent Study. One or two courses. *Staff*

222. Structure of Biological Macromolecules. Half course. *Richardson*

227. Introductory Biochemistry I. Prerequisite: two semesters of organic chemistry. One course. *Greenleaf, Hill, and Rajagopalan*

228. Introductory Biochemistry II. Prerequisites: two semesters of organic chemistry and Biochemistry 227. One course. *Fridovich and Webster*

259. Molecular Biology I: Proteins and Enzymes. Prerequisites: biochemistry, organic chemistry, and physical chemistry. C-L: Cell Biology 259, The University Program in Cell and Molecular Biology, Immunology 259, and Microbiology 259. One course. *Fierke and staff*

265S, 266S. Seminar. Topics and instructors announced each semester. Half course or variable. *Staff*

268. Nucleic Acids. Prerequisites: introductory biochemistry and equivalents of Biochemistry 259, Cell and Molecular Biology 247, Cell and Molecular Biology 277, and Cell and Molecular Biology 278. C-L: Cell Biology 268, The University Program in Cell and Molecular Biology, Immunology 268, Microbiology 268, and the University Program in Genetics. One course. *Steege and staff*

291. Physical Biochemistry. Prerequisites: undergraduate physical chemistry and one year of calculus. One course. *Oas and staff*

CELL BIOLOGY (CBI)

All courses require the consent of the director of undergraduate studies.

202. Medical Physiology. Limited to students whose training requires knowledge of human physiology as it pertains to medicine. Open to undergraduates only with consent of course leader. Students may take either 202 or 203-204, but not both, for credit. One course. *N. Anderson and staff*

203. Introduction to Physiology. Consent of instructor required. Students may take either 202 or 203-204, but not both, for credit. One course. *Blum and staff*

204. Cell and Molecular Physiology. (Continuation of 203.) Consent of instructor required. One course. *Mandel and staff*

205. Design and Analysis of Biological Experiments. One course. *Lobaugh*

210. Independent Study. Variable credit. *Staff*

211. Cellular Mechanisms of Injury. Consent of instructor required. One course. *LeFurgey*

212. Topics in Reproductive Biology. Prerequisite: Cell Biology 269 or equivalent. *N. Anderson, Saling, Schomberg, and Tyrey*

213. Oxygen and Physiological Function. Half course. *Jöbsis*

215. Seminar in the Physiology of Disease. Half course. *Mandel and guest faculty*

219. Molecular and Cellular Bases of Differentiation. C-L: Immunology 219, Microbiology 219, Neurobiology 219, and Pathology 219. One course. *Capel and Staff*

223. Cellular and Integrative Cardiovascular Physiology and Biophysics. Consent of instructor required. Prerequisites: Cell Biology 203 or equivalent and Physics 52L or equivalent. C-L: Biomedical Engineering 223. One course. *Benjamin and staff*

232. Extracellular Matrix and Cell Adhesion. Half course. *Bennett and Erickson*

236S. Seminar on the Cellular and Molecular Biology of Skeletal Muscle. One course. *Schachai*

237. Analytical Imaging in Biomedical Research. One course. *Ingram, Kopf, and LeFurgey*

243. Environmental Biochemistry. Given at Beaufort. Prerequisite: organic chemistry. C-L: Environment 243. One course. *Bonaventura*

244. Cellular and Molecular Research Techniques. Given at Beaufort. Prerequisite: organic chemistry. C-L: Environment 244. One course. *Bonaventura and Brouwer*

259. Molecular Biology I: Proteins and Enzymes. Consent of instructor required. C-L: Biochemistry 259, Immunology 259, and Microbiology 259. One course. *Richardson and staff*

268. Molecular Biology II: Nucleic Acids. Prerequisites: introductory biochemistry and Cell Biology 259 or consent of instructor. C-L: Biochemistry 268, Immunology 268, Microbiology 268, and the University Program in Genetics. One course. *Steege and staff*

269. Advanced Cell Biology. C-L: Biology 269. One course. *Siedow and staff*

Courses Currently Unscheduled

217. Membrane Transport

IMMUNOLOGY (IMM)

214. Fundamentals of Electron Microscopy. Prerequisites: introductory biology and consent of instructor. C-L: Microbiology 214. One course. *Miller*

219. Molecular and Cellular Bases of Differentiation. C-L: Cell Biology 219, Microbiology 219, Neurobiology 219, and Pathology 219. One course. *Capel and Staff*

244. Principles of Immunology. An introduction to the molecular and cellular basis of the immune response. Topics include anatomy of the lymphoid system, lymphocyte biology, antigen-antibody interactions, humoral and cellular effector mechanisms, and control of immune responses. Prerequisites: Biology 160 and Chemistry 152L and consent of instructor. C-L: Biology 244. One course. *Kostyu, McClay, and staff*

259. Molecular Biology I: Proteins and Enzymes. C-L: Biochemistry 259, Cell Biology 259, Microbiology 259, and the University Program in Cell and Molecular Biology 259. One course. *Richardson and staff*

268. Molecular Biology II: Nucleic Acids. Prerequisites: introductory biochemistry and Biochemistry 259 or consent of instructor. C-L: Biochemistry 268, Cell Biology 268, Microbiology 268, the University Program in Cell and Molecular Biology and the University Program in Genetics. One course. *Steege and staff*

269. Advanced Cell Biology. Prerequisite: introductory cell biology or consent of instructor. C-L: Biology 269, Cell Biology 269, Microbiology 269, and the University Program in Cell and Molecular Biology 269. One course. *Siedow and staff*

MICROBIOLOGY (MIC)

209, 210. Independent Study. A laboratory or library project. Consent of director of undergraduate studies and instructor required. Credit to be arranged. *Staff*

214. Fundamentals of Electron Microscopy. Prerequisites: introductory biology and consent of instructor. One course. *Miller*

219. Molecular and Cellular Bases of Differentiation. C-L: Cell Biology 219, Immunology 219, Neurobiology 219, and Pathology 219. One course. *Capel and staff*

221, 221L. Medical Microbiology. Consent of instructor required. One course, one and one half courses respectively. *Mitchell and staff*

259. Molecular Biology I: Proteins and Enzymes. C-L: Biochemistry 259, Cell Biology 259, and Immunology 259. One course. *Fierke and staff*

268. Molecular Biology II: Nucleic Acids. Prerequisites: introductory biochemistry and Biochemistry 259 or consent of instructor. C-L: Biochemistry 268, Cell Biology 268, Immunology 268, and the University Program in Genetics 268. One course. *Steege and staff*

282. Microbial Pathogenesis. Prerequisite: consent of the instructor. One course. *Hanna and staff*

Courses Currently Unscheduled

246S. Parasitic Diseases

NEUROBIOLOGY (NBI)

49S. First-Year (Undergraduate) Seminar. Topics vary each semester offered. One course. *Staff*

93S. The Neurobiology of Mind. Open only to students in the FOCUS Program. One course. *Einstein*

133. Fundamental Issues in the Study of the Brain. One course. See C-L: Psychology 133. *W. C. Hall*

154. Principles of Neurobiology. Prerequisites: Biology 25L and Chemistry 12L or equivalent. C-L: Biology 154 and Psychology 135. One course. *LaMantia*

195S, 196S. Special Topics in Neurobiology. One course each *Staff*

219. Molecular and Cellular Bases of Differentiation. C-L: Cell Biology 219, Immunology 219, Microbiology 219, and Pathology 219. One course. *Capel and staff*

PATHOLOGY (PTH)

All courses require consent of instructor and director of graduate studies.

209, 210. Independent study. Prerequisite: senior standing. Credit to be arranged. *Staff*

219. Molecular and Cellular Bases of Differentiation. C-L: Cell Biology 219, Immunology 219, Microbiology 219, and Neurobiology 219. One course. *Capel and Staff*

258. Cellular and Subcellular Pathology. Half course. *Shelburne and Sommer*

275. Fundamentals of Electron Microscopy and Biological Microanalysis. One course. *Brody, Ingram, Shelburne, and Sommer*

PHARMACOLOGY (PHR)

150. Pharmacology: Drug Actions and Reactions. Mechanisms of drug action, concepts of drug toxicity, resistance, tolerance and drug interactions. Examples of how drugs affect the autonomic and central nervous systems, the cardiovascular and endocrine systems, and how drugs treat infection and cancer. This course is designed for both science and nonscience majors, but preference will be given to junior biology majors concentrating in pharmacology. Prerequisites: introductory biology (Biology 25L) and chemistry (Chemistry 11L, 12L). One course. *Schwartz-Bloom*

160. Drugs, Brain, and Behavior. Mechanisms by which psychoactive drugs act. Changes which occur with chronic use of drugs; drug abuse and dependence. Social and legal implications of psychoactive drugs. This course is designed for both science and nonscience majors. Prerequisites: introductory biology (Biology 25L) and chemistry (Chemistry 11L, 12L). C-L: Psychology 127. One course. *Kuhn*

191, 192. Independent Study. For juniors and seniors with consent of director of undergraduate studies and supervising instructor. Variable credit. *Staff*

233. Essentials of Pharmacology and Toxicology. Prerequisites: introductory biology; Chemistry 151L; Mathematics 31, 32, and consent of instructor. One course. *Slotkin and staff*

254. Mammalian Toxicology. Prerequisites: introductory biology and Chemistry 151L, or consent of instructor. One course. *Abou-Donia and staff*

Medieval and Renaissance Studies (MED)

Professor Witt, *Chair*; Associate Professor Rasmussen, *Director of Undergraduate Studies*

A major or minor is available in this program.

The program in Medieval and Renaissance Studies is designed to provide the student with a well-rounded understanding of the historical, cultural, and social forces that shaped the medieval and Renaissance periods. The program is divided into four areas of study: fine arts (art and music); history; language and literature (English, French, German, Greek, Italian, Latin, and Spanish); and philosophy / religion. An interdisciplinary major is offered. See the section on the major below.

MEDIEVAL AND RENAISSANCE COURSES

21S. First-Year Seminar: Topics in Medieval Studies. Topics vary according to instructor: perspectives from history, literature, religion, philosophy, and the arts. One course. *Staff*

22S. First-Year Seminar: Topics in Renaissance Studies. Topics vary according to instructor: perspectives from history, literature, religion, philosophy, and the arts. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

114. Aspects of Medieval Culture. (CZ) A study of historical, literary, philosophical, and art historical materials introducing medieval culture and the methods developed for its study.

Not open to students who have taken Art 139. C-L: Art History 139, Classical Studies 139, and History 116. One course. *Rasmussen, Solterer, or Witt*

115. Aspects of Renaissance Culture. (CZ) A study of historical, literary, philosophical, and art historical materials introducing Renaissance culture and the methods developed for its study. C-L: Art History 149, History 148, and Italian 125. One course. *Rasmussen, Rice, Van Miegroet, and Witt*

160S. Topics in Medieval and Renaissance Studies. Interdisciplinary perspectives from the arts, history, literature, philosophy, and religion. For juniors and seniors and medieval and Renaissance studies majors, or with consent of instructor. Prerequisite: one course in medieval and/or Renaissance periods. One course. *Staff*

200S. Seminar in Medieval and Renaissance Studies. (CZ) Topics in the historiography and interpretation of medieval and Renaissance culture. Topics will vary from year to year. One course. *Staff*

OTHER COURSES AVAILABLE IN THE PROGRAM AND DESCRIBED UNDER THE LISTINGS OF THE DEPARTMENTS SPECIFIED BELOW

Art and Art History

- 134. Topics in Medieval Art and Architecture. *Staff*
- 140. Topics in Renaissance Art. *Rice*
- 141. Fifteenth-Century Italian Art. *Rice*
- 142. Sixteenth-Century Italian Art. *Rice*
- 145. Renaissance Art in Florence. *Rice*
- 146. Italian Renaissance Architecture. *Rice*
- 148. Art of the Netherlands in the Fifteenth Century. *Van Miegroet*
- 150. Italian Baroque Architecture. *Rice*
- 152. Art of the Netherlands in the Sixteenth Century. *Van Miegroet*
- 153. Art of the Northern Netherlands in the Seventeenth Century. *Van Miegroet*
- 154. German Art in the Fifteenth and Sixteenth Centuries. *Van Miegroet*
- 233S. Topics in Early Christian and Byzantine Art. *Wharton*
- 236S. Topics in Romanesque and Gothic Art and Architecture. *Bruzeliuss*
- 243S. Topics in Netherlandish and German Art. *Van Miegroet*
- 247S. Topics in Italian Renaissance Art. *Rice*
- 260S. Topics in Italian Baroque Art. *Rice*

Classical Studies

- 117. Ancient Myth in Literature. *Davis or Newton*

Distinguished Professor Courses

- 190S. The Pagan World of the Divine Comedy. *Clay*

English

- 121. Introduction to Medieval English Literature. *Aers or Beckwith*
- 123. English Literature: 1600 to 1660. *DeNeef, Fish, Goldberg, or Randall*
- 140, 141. Chaucer. *Aers, Beckwith, DeNeef, or Gopen*
- 143, 144. Shakespeare. *DeNeef, Gopen, Jones, Porter, or Randall*
- 145. Milton. *Fish, Goldberg, or Price*
- 208. History of the English Language. *Butters or J. Tetel*
- 212. Middle English Literature: 1100 to 1500. *Aers or Beckwith*
- 221. Renaissance Prose and Poetry: 1500 to 1660. *DeNeef, Fish, Randall, or Shannon*
- 225. Renaissance Drama: 1500 to 1642. *Goldberg, Porter or Randall*

French

- 145S. Topics in Renaissance Literature and Culture. *M. Tetel*
- 146S. Montaigne and Self-Portraiture. *M. Tetel*
- 148. French Drama of the Seventeenth Century. *Longino*
- 211. History of the French Language. *Thomas*

German

- 164S. Medieval German Literature (in English translation). *Rasmussen*
- 165S. The Vikings and Their Literature. *Keul*
- 201. Introduction to Medieval German: The Language of the German Middle Ages and Its Literature. *Rasmussen*
- 202S. Medieval Seminar. *Rasmussen*

- 203S. Sex, Gender, and Love in Medieval German Literature. *Rasmussen*
- 210S. Renaissance and Reformation. *Borchardt*
- 215S. German Baroque Literature. *Borchardt*
- 260. History of the German Language. *Rasmussen*

History

- 107A. Tudor/Stuart Britain. *Herrup*
- 117. Early Modern Europe. *Neuschel*
- 133A. The Birth of Europe: Society and Culture, 200-900. *Peyroux*
- 133B. Medieval Europe, 1000 - 1450. *Shatzmiller*
- 133C. British Isles in the Middle Ages. *Peyroux*
- 138. Renaissance and Reformation Germany. *Robisheaux*
- 151A. The Intellectual Life of Europe, 1250-1600. *Witt*
- 173. History of Spain from Late Medieval Times to the Present. *TePaske*
- 195S.13, 196S.13. Problems in Early Modern English History. *Herrup*
- 195S.37. Before Columbus: Western Views of the Non-Western World. *Green*
- 195S.52. Issues in Medieval History. *Staff*
- 196S.11. Medieval Universities and Their Students. *Shatzmiller*
- 196S.41. Women in Medieval Society. *Green*
- 221. Special Topics in the History of Europe, 1200-1700. *Staff*
- 222A. Problems in the Intellectual History of the European Renaissance and Reformation. *Witt*
- 237S. Europe in the Early Middle Ages. *Staff*
- 238S. Europe in the High Middle Ages. *Staff*
- 267S. England in the Sixteenth Century. *Herrup*
- 268S. England in the Seventeenth Century. *Herrup*

Italian

- 101. Introduction to Italian Literature. *Caserta or Finucci*
- 145S. Topics in Renaissance Literature and Culture. *Finucci*
- 284, 285. Dante. *Caserta*

Latin

- 221. Medieval Latin. *Newton*

Students interested in Latin paleography should consult the director of undergraduate studies in the program.

Music

- 155S. Music History I: To 1650. *Brothers*
- 211. Notation. *Brothers or Williams*
- 222. Music in the Middle Ages. *Brothers*
- 223. Music in the Renaissance. *Brothers or Silbiger*

Philosophy

- 119. Medieval Philosophy. *Mahoney*
- 120. Late Medieval and Renaissance Philosophy. *Mahoney*
- 218S. Medieval Philosophy. *Mahoney*
- 219S. Late Medieval and Renaissance Philosophy. *Mahoney*

Religion

- 134. Jewish Mysticism. *Bland*
- 146,147. Introduction to Islamic Civilization. *Cornell, Lawrence, and staff*

Spanish

- 151. Spanish Literature of the Renaissance and the Baroque. *Staff*
- 210. History of the Spanish Language. *Garci-Gómez*

THE MAJOR

The major requires ten courses, at least eight of which must be at the 100 level or above in the following four areas of study: history; fine arts (art and music); language and literature (English, French, German, Greek, Italian, Latin, and Spanish); and philosophy-religion.

Two courses may be at the introductory level approved by the director of undergraduate studies. Students presenting two courses in the Medieval and Renaissance FOCUS program do not need approval.

Each program is tailored to the needs and interests of the student under the supervision of a committee consisting of faculty members from appropriate departments. After discussion with the director of undergraduate studies for Medieval and Renaissance Studies, the

student submits a provisional program of study outlining special interdisciplinary interests. Normally the program is planned well before the end of the sophomore year to allow time to acquire a working knowledge of languages pertinent to specific interests.

THE MINOR

Requirements. Five courses, at least three of which must be at the 100 level or above; courses must include two courses in areas outside the major area of interest or three courses in the major area of interest and Medieval and Renaissance Studies 114 and 115.

Microbiology

For courses in microbiology, see Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates.

Military Science—Army ROTC (MSC)

Visiting Professor Plemmons, Lieutenant Colonel, U.S. Army, *Chair and Supervisor of Senior Instruction*; Visiting Assistant Professor Padgett, Captain, U.S. Army Reserve, *Director of Undergraduate Studies*; Supervisor of Junior Instruction and Commandant of Cadets; Visiting Assistant Professor Stroh, Captain, U.S. Army, *Supervisor of Freshman and Sophomore Instruction and Recruiting Operations Officer*

The Department of Military Science offers students from all disciplines within the university the opportunity to study the following subjects: leadership (theory and practice), management (time, personnel, and material), ethics and the military profession, the role and responsibility of the military in a democratic society, the philosophy and practice of military law, strategy, and tactics.

The Army ROTC program is made up of a two-year basic course of study (freshman and sophomore level) which is taken without obligation by nonscholarship students, and a two-year advanced course of study (junior and senior level) which includes a five-week advanced camp, usually completed during the summer prior to the senior year. Direct entry into the advanced course is sometimes permitted if an applicant has previous military training or experience, or when a six-week basic camp is completed. To be eligible for participation in the advanced course, students must successfully complete the basic course (unless direct entry is permitted), be physically qualified, be of good moral character, have a minimum of two years remaining as a student (undergraduate or graduate level, or a combination), and sign a contract to accept a commission in the United States Army, the Army National Guard, or the Army Reserve as directed by the Secretary of the Army.

Laboratory is mandatory each semester for scholarship cadets and nonscholarship cadets. Some specific laboratories are required for non-ROTC students taking Military Science 51, 52, and 113. Students should consult the Department of Military Science (telephone 1-919-660-3090 collect, or 1-800-222-9184, toll free) for more detailed information. Also see the Army Reserve Officers' Training Corps section under Special Programs in this bulletin.

1L. Leadership Laboratory. (Fall semester only.) Drill and ceremonies, marksmanship training, land navigation exercises, first aid, small unit tactics, and confidence training. Must be repeated with each fall semester course. No credit. *Padgett*

2L. Leadership Laboratory. (Spring semester only.) Drill and ceremonies, communications, and tactical exercises. Must be repeated with each spring semester course. No credit. *Padgett*

11. Introduction to ROTC and the Army. The military organization with emphasis on tradition, doctrine, and contribution to national objectives. Laboratory required for ROTC cadets. Half course. *Stroh*

12. The Military Profession. Introduction to the concept of the military as a profession. Questions of ethics and values in the military; the issue of war and morality. Laboratory required for ROTC cadets. Half course. *Stroh*

51. Military Topography. Interpretation and use of topographical maps to facilitate land navigation. Consideration of the military significance of terrain. Laboratory required for Army ROTC cadets. Half course. *Stroh*

52. Introduction to Small Unit Tactics. Introduction to planning, organizing, and conducting small unit offensive and defensive operations. Consideration of the principles of war. Laboratory required for Army ROTC cadets. Half course. *Stroh*

113. Advanced Military Operations. Fundamentals of the conduct of military operations including advanced military topography; unit movements; route planning; nuclear, biological, and chemical defense; and military communications. Laboratory required for Army ROTC cadets. Prerequisites: Military Science 51 and 52 or ROTC Basic Camp. One course. *Padgett*

114. Advanced Tactical Applications. Study of threat forces to include doctrine, organization, equipment, and training. Conduct of platoon offensive, defensive, and patrolling operations for Army infantry units. Laboratory required for Army ROTC cadets. Prerequisite: Military Science 113. One course. *Padgett*

151S. Military Justice and Law of War. Introduction to the Uniform Code of Military Justice, selected topics in military law, the law of land warfare, and war and morality. An analysis of the relationship of leadership to these topics. Laboratory required for Army ROTC cadets. One course. *Plemmons*

152. Leadership and Command Management. Theory and practice of leadership and military management techniques for mission accomplishment. Laboratory required for Army ROTC cadets. One course. *Plemmons*

191. Independent Study. Directed readings and research in military science. One course. *Padgett*

Music (MUS)

Professor Todd, *Chair*; Assistant Professor of the Practice Bagg, *Director of Undergraduate Studies*; Professor of the Practice Parkins, *Director of Performance*; Professor Silbiger; Associate Professors Bartlet, Gilliam, and Jaffe; Assistant Professors Brothers, Henry, Lindroth, and Moreno; Professors Emeriti Bryan, Douglass, Hanks, Williams, and Withers; Associate Professor Emeritus Saville; Associate Professors of the Practice Dunn, Jeffrey, Pritchard, Raimi, Votta, and Wynkoop; Assistant Professors of the Practice Ku, Love, Muti, and Troxler; Adjunct Assistant Professor Druessedow; Adjunct Associate Professor of the Practice Jensen; Visiting Assistant Professor Schulenberg; Lecturer Meintjes; Staff Associates Crawford, Dimsdale, Eagle, Gilmore, Hanks, Hawkins, Kris, Lail, Lile, Pederson, Reed, Schultz, and Tektonidis

A major or a minor is available in this department.

For over two thousand years, music has been viewed as a crucial part of education, compulsory in some cultures, optional in many, formative in all. Music is customarily regarded as an art, but as a university subject it has its own scientific language, logic, and grammar, in the understanding of which the mind is stretched and tested. Furthermore, music as taught at Duke includes assumptions that history, theory, composition, and performance are areas of comparable worth both in themselves and as a means of understanding the many facets of musicianship. Almost every student has some personal involvement with music (often with the many kinds of music), and the courses aim to further that involvement, whether passive or active, a simple hobby or a compelling force.

Courses include many kinds of instruction: applied lessons, history and theory lectures and seminars, harmony classes, composition seminars, ensemble participation, practical laboratory work (such as ear-training), coaching sessions for conductors and chamber musicians, and jazz improvisation. Emphasis is placed equally on theory and practice, and students' musical activity can vary widely across the spectrum from composing their own music to endeavoring to understand the technical, historical, and sociological context of other composers' music.

Musical studies can have a particular value in Program II. So many areas of interest in literature (English and world literature), the arts, art history, sociology, politics, philosophy, religion, psychology, and physics are illustrated, paralleled, or elucidated by aspects of music, just as music itself is by those other disciplines.

THEORY, COMPOSITION, AND CONDUCTING

The department's theory courses are designed to give the student a deeper understanding of musical materials: harmony, counterpoint, voice leading, and musicianship. This is accomplished through analysis of repertoire, composition, aural work, and keyboard playing (score reading, figured bass, and simple improvisation).

36. Acoustics and Music. (NS) No previous knowledge of physics is assumed. See C-L: Physics 36. One course. *Lawson*

55. Introduction to Music Theory. (AL) Fundamentals of notation, melodic and harmonic practice, analysis, and score reading, as a basis for independent work. Prerequisite: some ability to read music. One course. *Love, Troxler, or staff*

56. The Songwriter's Vocabulary. (AL) Writing songs in various twentieth-century popular styles. Fundamentals of form, harmony, voice leading, text setting, and production. Prerequisite: Music 55 or consent of instructor. One course. *Staff*

65. Fundamentals of Music Theory. (AL) Physical properties of sound, principles of diatonic tonal organization, melodic and harmonic constructions, elementary counterpoint, and figured bass. Laboratory. Prerequisites: basic knowledge of musical notation and vocabulary. One course. *Lindroth, Moreno, or Parkins*

66. Tonal Harmony. (AL) Harmonic language of eighteenth and nineteenth centuries, functional chromaticism, and introduction to musical forms. Laboratory. Prerequisite: Music 65. One course. *Lindroth or Moreno*

75. Jazz Improvisation. (AL) The theory of jazz improvisation for all instruments and its practical application to the different styles of jazz. Consent of instructor required. Half course. *Crawford or Jeffrey*

116S. Counterpoint. (AL) Polyphonic practice from the sixteenth through the twentieth centuries; sacred and secular music. Laboratory. Prerequisite: Music 66 or consent of instructor. One course. *Jaffe or Moreno*

117S. Form, Analysis, and Compositional Techniques. (AL) Analytical studies and compositional exercises in various forms, techniques, and styles with an emphasis on nineteenth- and twentieth-century music. Laboratory. Prerequisite: Music 66 or consent of instructor. One course. *Jaffe, Lindroth, or Moreno*

118S. Special Topics in Music Theory. (AL) Topics vary. Prerequisite: Music 66 or consent of instructor. One course. *Jaffe, Lindroth, or Moreno*

123. Musicianship I. Development of practical musical skills: sight singing, ear training, and keyboard proficiency. Prerequisite: for music majors, Music 66; for nonmajors, consent of instructor. Half course. *Staff*

124. Musicianship II. Prerequisite: Music 123. Half course. *Staff*

128. Instrumental Conducting. (AL) Development of techniques of conducting instrumental ensembles with emphasis on orchestral repertoire. Score-reading and analysis, principles of interpretation, and practical conducting experience. Prerequisite: Music 66 or consent of instructor. One course. *Muti or Votta*

129. Choral Conducting. (AL) Development of techniques of conducting vocal repertoire, ranging from church anthems to large-scale works. Score-reading and analysis, principles of interpretation, and practical conducting experience. Prerequisite: Music 66 or consent of instructor. One course. *Wyntkoop*

151S. Composition I. (AL) Composing original music in smaller forms for voice, piano, and other instruments. Studies in compositional techniques. Prerequisites: Music 65 and 66 or consent of instructor. One course. *Jaffe or Lindroth*

152S. Composition II. (AL) See Music 151S. Prerequisites: Music 65 and 66 or consent of instructor. One course. *Jaffe or Lindroth*

153S. Electronic Music: Introduction to Digital Synthesis. (AL) Composing electronic music with frequency modulation synthesis, MIDI sequencing, and digital recording and editing. History of electronic music. One course. *Lindroth*

HISTORY, LITERATURE, AND MUSICOLOGY

The study of music history and literature contributes to a broader knowledge of culture and society. Courses offer students the opportunity to examine compositions in their historic and/or social context. In addition to surveying significant forms, genres, and styles, and their development, the courses include consideration of music's function, the place of musicians, aspects of performance practice, and aesthetic value. Although the normal prerequisite for Music 155S-159S (Music History I-III) is Music 65, interested students in other disciplines with some background in music are encouraged to ask individual instructors for permission to enroll.

20S. Special Topics in Music. Opportunities to engage with a specific issue in music, with emphasis on student writing. One course. *Staff*

48S. Music in Contemporary America. (AL) Major topics and trends in music, including the legacy of serialism, minimalism, electronic music, fusion, jazz, musical theater, and film music. Examination of works by leading composers (among them Tower, Reich, and Glass); consideration of music's place in contemporary society as a performing art and entertainment. Open only to students in the FOCUS Program, The Arts in Contemporary Society. One course. *Gilliam or Jaffe*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

74. Introduction to Jazz. (AL) A survey examining musical, aesthetic, sociological, and historical aspects. C-L: African and African-American Studies 74. One course. *Jeffrey*

119. The Humanities and Music. (AL) Study of music's relationship to the humanities (literature, art, philosophy, cultural and social history) through selected topics. Readings from primary sources, listening to representative pieces of music. C-L: Comparative Area Studies. One course. *Bartlet or staff*

125. Masterworks of Music. (AL) An introduction to the lives and works of major Western European and American composers. One course. *Henry, Muti, Silbiger, or Todd*

125D. Masterworks of Music. (AL) Same as Music 125 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Gilliam or Votta*

136. Introduction to World Music. (CZ) Study of music in its cultural context through a survey of selected musical styles from Africa, Asia, and the Americas: musical systems and interrelationships between musicians and their societies. C-L: Comparative Area Studies. One course. *Meintjes*

138S. Special Topics in World Music. (AL, CZ) Topics to be announced. C-L: Comparative Area Studies. One course. *Meintjes or staff*

141S. Special Topics in Jazz. (AL) Topics vary. Also taught as African and Afro-American Studies 141S. Prerequisite: Music 74 or consent of instructor. One course. *Brothers or Jeffrey*

142. African-American Music in the Twentieth Century. (AL) A survey including ragtime, blues, jazz, religious music, and the concert tradition. Cultural and social contexts such as commercial influences, race relations, and the Great Migration. C-L: African and African-American Studies 142. One course. *Brothers*

143. Beethoven and His Time. (AL) The music of Beethoven and its relation to contemporary historical, social, and literary developments. Emphasis on the nine symphonies. C-L: Comparative Area Studies. One course. *Bartlet, Gilliam, Silbiger, or Todd*

144. Bach and His Time. (AL) The music of Johann Sebastian Bach and its historical and cultural background, with emphasis on the sacred and the instrumental works. Some consideration also given to the music of Bach's contemporaries, including Vivaldi, Rameau, and Handel. C-L: Comparative Area Studies. One course. *Silbiger*

145. Mozart and His Time. (AL) A biographical sketch and a study of his works in their relationship to the past and to works of contemporaries in various European countries. C-L: Comparative Area Studies. One course. *Silbiger*

146. Nineteenth-Century German Romanticism in Music. (AL) The principal nineteenth-century figures, including Beethoven, Schubert, the Mendelssohns and Schumanns, Liszt, Wagner, and Brahms. Their eighteenth-century antecedents (C. P. E. Bach, Haydn, Mozart). One course. *Todd*

147. Verdi and Italian Romantic Opera. (AL) The operas of Giuseppe Verdi, from early works closely connected with the Risorgimento to later masterworks like *Otello*, considered in relation to his Italian predecessors and contemporaries. Includes the study of musical scores, dramatic aspects, and literary background, as well as artistic and social conventions. One course. *Muti*

155S. Music History I: To 1650. (AL) The history of music in medieval and early modern Europe in its cultural and social context. Prerequisite: Music 65 or consent of instructor. C-L: Medieval and Renaissance Studies. One course. *Brothers*

158S. Music History III: After 1850. (AL) The history of music in Europe and the United States in its cultural and social context. Prerequisite: Music 65 or consent of instructor. C-L: Comparative Area Studies. One course. *Gilliam or Todd*

159S. Music History II: From 1650 to 1850. (AL) The history of music in Europe in its cultural and social context. Not open to students who have had Music 156S or Music 157S. Prerequisite: Music 65 or consent of instructor. C-L: Comparative Area Studies. One course. *Bartlet or Silbiger*

164. The Musical. (AL) See C-L: Drama 111. One course. *Clum*

165. Opera in Vienna. (AL) Focus on the composers, music, historical context, and texts of the operas being performed at the Staatsoper and Volksoper. Analysis of critical reviews. Attendance at one opera per week required. Offered as part of the Duke in Vienna Program. One course. *Moore*

166. Opera. (AL) History of opera from the late sixteenth century to the present. Relationship of music and text; opera as social commentary; changing forms and styles. Selected composers, especially Mozart, Verdi, Puccini, and Wagner. One course. *Bartlet or Muti*

167. Symphonic Literature. (AL) An investigation of the symphony, tone poem, and symphonic suite from seventeenth-century antecedents to the orchestral repertoire of the present century. One course. *Henry*

168. Piano Music. (AL) The two-hundred-year tradition of music for the piano, the evolution of the instrument, and its principal composers (including Mozart, Beethoven, Chopin, Liszt, Brahms, and other major figures up to the present day). Performance traditions, the role of virtuosity, and improvisation. One course. *Todd*

169. Hollywood Film Music. (AL) Film scores from the 1930s to the present. Technical, structural, and aesthetic issues, as well as the problem of musical style. C-L: Film and Video. One course. *Gilliam*

185S, 186S. Seminar in Music. (AL) Primarily for junior and senior music majors. Topics to be announced. Consent of instructor required. One course each. *Staff*

187S, 188S. Seminar on Interpretation and Performance. (AL) Interpretative analysis of instrumental (piano, strings, winds) and vocal repertoire from baroque to modern composers. Participants expected to perform. Consent of instructor required. One course each. *Troxler, Votta, or staff*

189S, 190S. Seminar in Music History. (AL) Primarily for junior and senior music majors. Topics to be announced. Prerequisites: Music 155S, 158S, and 159S. One course each. *Staff*

For Advanced Undergraduates and Graduates

201. Introduction to Musicology. (AL) Methods of research on music and its history, including studies of musical and literary sources, iconography, performance practice, ethnomusicology, and historical analysis, with special attention to the interrelationships of these approaches. One course. *Bartlet or Druesedow*

203. Proseminar in Performance Practice. (AL) Critical methods in the study of historical performance practice, including the evaluation of evidence provided by musical and theoretical sources, archival and iconographic materials, instruments, and sound recordings. Current issues regarding the performance practice for music from the Middle Ages to the twentieth century. One course. *Silbiger*

211, 212. Notation. (AL) Development and changing function of musical notation from c. 900 to c. 1900, including plainchant notations, black notations, white notations, the invention of printing (particularly movable type and engraving), keyboard and lute tablatures, scores. One course each. *Brothers or Silbiger*

213. Theories and Notation of Contemporary Music. (AL) The diverse languages of contemporary music and their roots in the early twentieth century, with emphasis on the problems and continuity of musical language. Recent composers and their stylistic progenitors: for example, Ligeti, Bartók, and Berg; Carter, Schoenberg, Ives, and Copland; Crumb, Messiaen, and Webern; Cage, Varèse, Cowell, and Stockhausen. One course. *Jaffe or Lindroth*

215. Music Analysis. (AL) Historical, philosophical, and ideological issues raised by music analysis. Intensive study of harmony and voice leading in the works of major tonal composers, with emphasis on the analytic approach of Heinrich Schenker. One course. *Moreno or Todd*

217. Selected Topics in Analysis. (AL) An exploration of analytical approaches appropriate to a diversity of music, which may include settings of literary texts, pre-tonal music, and music in oral and vernacular traditions. Prerequisite: Music 215 or consent of instructor. One course. *Silbiger*

218. Advanced Counterpoint. (AL) Selected topics in modal or tonal contrapuntal practice with emphasis on music writing up to five parts. Consent of instructor required for students not registered for doctoral work in composition. One course. *Jaffe, Lindroth, or Moreno*

222. Music in the Middle Ages. (AL) Selected topics. C-L: Medieval and Renaissance Studies. One course. *Brothers*

223. Music in the Renaissance. (AL) Selected topics. C-L: Medieval and Renaissance Studies. One course. *Brothers or Silbiger*

224. Music in the Baroque Era. (AL) Selected topics. One course. *Silbiger*

225. Music in the Classic Era. (AL) Selected topics. One course. *Bartlet or Todd*

226. Music in the Nineteenth Century. (AL) Selected topics. One course. *Bartlet, Gilliam, or Todd*

227. Music in the Twentieth Century. (AL) Selected topics. One course. *Gilliam or Todd*

236. Nineteenth-Century Piano Music. (AL) Beethoven, Schubert, Weber, Mendelssohn, Schumann, Chopin, Liszt, and Brahms. The arts of improvisation and transcription, the keyboard virtuoso, the character piece, and the conflict between romantic content and form. One course. *Todd*

295S. Composition Seminar. (AL) Selected topics in composition. One course. *Jaffe or Lindroth*

296S. Analysis of Contemporary Music. (AL) Structures, expressive intentions, and functions since 1914. Contemporary orchestral music, American music, European music, popular media, musical tradition, and contemporary composers. Analysis of works performed in the department's Encounters Series with occasional guest composers present. One course. *Jaffe or Lindroth*

297, 298, 299. Composition. (AL) Weekly independent study sessions at an advanced level with a member of the graduate faculty in composition. One course each. *Jaffe or Lindroth*

INDEPENDENT STUDY

Admission to these courses will be subject to the approval of the director of undergraduate studies and the instructor. The instructor and course content will be established in accordance with the individual student's interests and capacities.

177, 178. Independent Study in Conducting. Advanced work in reading scores, analysis, principles of interpretation, and practical conducting experience. Prerequisite: Music 128 or 129 or consent of instructor. One course each. *Muti, Votta, or Wynkoop*

179, 180. Independent Study in Musical Performance.* Open only to sophomores possessing an exceptional technical and interpretative command of a musical medium. Requires either a half-length recital at the end of each semester of study or a full-length recital at the end of the second semester. In the latter case, a brief performance before a jury of music department faculty is required at the end of the first semester. Prerequisites: previous registration in private instruction in applied music at Duke, audition, and consent of instructor. One course each. *Staff*

*The schedule of fees for private lessons is applicable to courses 179, 180, 181, 182, 183, 184 (see subsection on fees).

181, 182. Independent Study in Musical Performance.* Same as 179, 180, but for juniors. One course each. *Staff*

183, 184. Independent Study in Musical Performance.* Same as 179, 180, but for seniors. One course each. *Staff*

191, 192. Independent Study. Directed reading, research, and/or theoretical analysis, culminating in a substantial paper; or exploration of advanced compositional techniques resulting in a work of larger scale. For juniors only. One course each. *Staff*

193, 194. Independent Study. Same as 191, 192, but for seniors. One course each. *Staff*

APPLIED MUSIC

In conjunction with theory and history, performance is an active way of understanding music literature, facing questions of style, and honing one's technical and expressive skills. Provided they qualify by audition, students are encouraged to enroll in private instruction and to participate in ensembles. Auditions must be arranged with the instructor prior to registration. Enrollment in an applied music course does not guarantee permission to enroll in the instructor's class or ensemble the following semester; in some cases another audition may be required. For those students who wish to study privately but do not qualify for university-level instruction, a list of music teachers in the immediate area who are available to Duke students can be obtained from the department office. All applied music courses may be repeated for credit, but no more than two ensembles may be taken concurrently.

57S, 58S. Vocal Diction. 57S: Italian/English; 58S: German/French. For singers, actors, radio announcers, and public speakers. Introduction to the international phonetic alphabet. Students will be required to sing in class. Written, oral, and vocal performance examinations. Half course each. *Lail*

Instruction: half hour

- 79. **Class Applied Music.** Quarter course. *Lail or staff*
- 80. **Piano.** Quarter course. *Crawford, Hawkins, or Love*
- 81. **Strings.** Quarter course. *Bagg, Ku, Lile, Pritchard, Raimi, or Reed*
- 82. **Woodwinds.** Quarter course. *Gilmore, Jeffrey, Pederson, Schultz, or Troxler*
- 83. **Brass.** Quarter course. *Dimsdale, Eagle, or Kris*
- 84. **Percussion.** Quarter course. *Hanks*
- 85. **Voice.** Quarter course. *Dunn, Jensen, Lail, or Tektonidis*
- 86. **Organ.** Quarter course. *Parkins*
- 87. **Harpsichord.** Quarter course. *Parkins*

Instruction: 1 hour

- 90. **Piano.** Half course. *Crawford, Hawkins, or Love*
- 91. **Strings.** Half course. *Bagg, Ku, Lile, Pritchard, Raimi, or Reed*
- 92. **Woodwinds.** Half course. *Gilmore, Jeffrey, Pederson, Schultz, or Troxler*
- 93. **Brass.** Half course. *Dimsdale, Eagle, or Kris*
- 94. **Percussion.** Half course. *Hanks*
- 95. **Voice.** Half course. *Dunn, Jensen, Lail, or Tektonidis*
- 96. **Organ.** Half course. *Parkins*
- 97. **Harpsichord.** Half course. *Parkins*

Ensemble Classes: pass/fail

- 100. **Symphony Orchestra.** Quarter course. *Muti*
- 101. **Wind Symphony.** Quarter course. *Votta*
- 102. **Marching Band.** Quarter course. *Boumpani*
- 103. **Jazz Ensemble.** Quarter course. *Jeffrey*
- 104. **Small Jazz Ensemble.** Quarter course. *Jeffrey*
- 105. **Collegium Musicum.** Quarter course. *Staff*
- 106. **Chamber Music.** Quarter course. *Hawkins*
- 111. **Opera Workshop.** Quarter course. *Lail*

*The schedule of fees for private lessons is applicable to courses 179, 180, 181, 182, 183, 184 (see subsection on fees).

112. Chapel Choir. Quarter course. *Wynkoop*

113. Chorale. Quarter course. *Wynkoop*

Credit in Applied Music. (Skills courses credit not applicable to area of knowledge requirements.) Credit for instruction in courses below 100 is granted on the basis of a half course per semester for one hour of private instruction per week; or a half course per year for one half hour of private instruction or one period of class study. An additional weekly class meeting for performance and criticism may be required by the instructor without additional credit.

Fees. Applied music instruction in one medium (instrument or voice) is offered free to music majors. There is a fee for additional instruction for music majors and all instruction for nonmajors. For specific information on those fees (for one-hour and half-hour private lessons and half-hour class lessons) consult the Office of the Bursar.

Fees are not refundable after the final drop/add day.

No charge is made for practice room facilities for students registered at Duke. A fee schedule for the use of facilities by others is available from the music department office.

See also Institute of the Arts in this bulletin.

COURSES CURRENTLY UNSCHEDULED

120S. Women in Music. (CZ)

139. Twentieth-Century Music. (AL)

156S. Music History IIA: Late Renaissance, Baroque. (AL)

157S. Music History IIB: Rococo and Classic. (AL)

THE MAJOR

A major or second major in music is a means of preparing students for further professional training in the branches of the art, for graduate study as historians, composers, and performers, and for a more intimate understanding of one of life's most important experiences. The music major can also be an attractive pursuit for the well-rounded undergraduate planning a career in another field, such as business, law, or medicine. The aim of the required courses is to give a balanced selection of history, theory, composition, and performance, reinforced by constant attention to the art of listening. With the required courses as their foundation, students choose electives to further their interest in, or gifts for, a particular music activity, so that a performer will have a good theoretical background, a historian considerable experience as a player, a composer various kinds of understanding of music of the past, and so on.

Ten courses are required for the major, at least eight of which must be at the level of 100 or above.

Prerequisites. Music 65, 66, and one year of applied music study in an instrument or voice; two semesters of participation in a departmental ensemble (excluding Music 102), with or without credit.

Major Requirements. Music 116S, 117S, 123 and 124 (two half courses), 155S, 158S, 159S, either 189S or 190S or a 200-level course approved by the director of undergraduate studies, and one additional elective approved by the director of undergraduate studies. For students matriculating before fall 1995, 156S and 157S may replace 159S and either 189S or 190S or an approved 200-level course. Those who plan to study music beyond the undergraduate level are strongly advised to prepare themselves in two or more foreign languages.

Honors/Distinction. Music majors who have earned a minimum 3.5 average in music courses may undertake work leading to departmental graduation with distinction. The candidate must make application to the director of undergraduate studies by March 20 of the junior year. The project is normally a year-long endeavor involving an independent

study or an appropriate graduate seminar each semester of the senior year. It must culminate in (a) a substantial paper (historical, analytical, or theoretical); or, (b) a full-length recital with a shorter paper or composition; or, (c) a major composition with a shorter paper or half-length recital. The final project must be approved by a faculty committee.

THE MINOR

Six full course units (including the prerequisite) are required for the minor, of which at least three full course units must be taken at the 100-level or above.

Prerequisite: Music 65.

Requirements. Five full course credits, as follows. Two full course credits, one of which must be in music history, from among: Music 66, 75, 155S, 158S, 159S (students matriculating before fall 1997 may include 156S and 157S); one full course credit in performance from among: Music 79-87, 90-97, 100-101, 103-106, 111-113, 179-184; two additional full course credits in music, one of which must be above 114.

Naval Science—Navy ROTC (NS)

Professor Field, Captain, U.S. Navy, *Chair*; Visiting Assistant Professor Bowen, Captain, U.S. Marine Corps, *Director of Undergraduate Studies*; Visiting Associate Professor Kaufman, Commander, U.S. Navy; Visiting Assistant Professors Bell, Lieutenant, U.S. Navy, Garvey, Lieutenant, U.S. Navy, and Lott, Lieutenant, U.S. Navy

Courses in naval science are open to all students. The program in naval science offers students an opportunity to gain a broad-based knowledge in naval studies leading to a challenging career as a Navy or Marine Corps officer. Since a major is not available in this program, scholarship program participants are encouraged to pursue majors in technical fields, although a major in any field of study leading to a baccalaureate degree meets the basic requirement. The academic program for an approved degree and commission must include all naval science courses and laboratories. Navy option scholarship students must complete one year of calculus by the end of the sophomore year, one year of calculus-based physics by the end of the junior year, one semester of American military history or national security policy, one year of English, and one semester of computer science.

Nonscholarship Navy option student requirements are one year of mathematics, one year of physical science, one year of English, and one semester of computer science. Marine Corps option students are required to take one semester of American military history or national security policy.

11. Naval Orientation. Organization, missions, and branches of specialization within the United States Navy. Customs, traditions, leadership, and career opportunities. No credit. *Garvey*

11L. Naval Orientation Laboratory. Practical application of the elements and material presented in Naval Science 11. No credit. *Garvey*

12. Naval Ships Systems. Quantitative study of basic naval ships' systems. Focus on propulsion and various auxiliary systems. Ship design, stability, and damage control. One course. *Lott*

12L. Naval Ships Systems Laboratory. Practical application of the theories and principles of naval ships systems. No credit. *Lott*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

52. Seapower and Maritime Affairs. The role of seapower in national and foreign policy, and as an instrument of politico-military strategy. Includes comparative study of United States and Soviet maritime strategies. One course. *Garvey*

53L. Seapower Laboratory. Case studies and contemporary issues dealing with United States Navy. Mandatory for Navy ROTC midshipmen. No credit. *Garvey*

126. Concepts and Analyses of Naval Tactical Systems. Detection systems; systems integration into current naval platforms and their offensive and defensive capabilities. One course. *Lott*

126L. Naval Tactical Systems Laboratory. Practical application of the theories and principles of naval tactical systems. No credit. *Iseminger*

131. Navigation. Theory, principles, and procedures of ship navigation, movements, and employment. Dead reckoning, piloting, celestial and electronic principles of navigation. Naval Science 131L should be taken concurrently. One course. *Bell*

131L. Navigation Laboratory. Practical application of the theories and principles of navigation as presented in the lecture series. No credit. *Bell*

132. Naval Operations. Components of general naval operations, including concepts and application of tactical formations and dispositions, relative motion, maneuvering board and tactical plots, rules of the road, and naval communications. Naval Science 132L is a concurrent requirement. One course. *Bell*

132L. Naval Operations Laboratory. Practical application of the theories of naval operations as presented in the lecture series. No credit. *Bell*

137L, 138L. Marine Tactics Laboratory. Concepts and applications of tactical employment of Marine amphibious forces. Ground weapons systems, land navigation, and small unit tactics. No credit. *Bowen*

141S. Evolution of Warfare. Continuity and change in the history of warfare, with attention to the interrelationship of social, political, technological, and military factors. One course. *Bowen*

145L. Naval Leadership and Management I. Study of organizational behavior and management in the context of naval organization. Topics include discussion of leadership and management functions of planning, controlling, and directing. Practical applications explored using case studies. No credit. *Kaufman*

146L. Naval Leadership and Management II. The study of officer responsibilities in naval administration. Discussions of counseling methods, military justice, human resources management, and supply systems. No credit. *Kaufman*

147L, 148L. Marine Leadership Laboratory. Marine Corps career management, naval correspondence, force structure, leadership techniques, and training. No credit. *Bowen*

151S. Amphibious Operations. Development of amphibious doctrine, with attention to its current applications. One course. *Bowen*

191. Independent Study. Directed reading and research. Open only to qualified students in junior and senior years by consent of director of undergraduate studies. One course. *Staff*

Neurobiology

For courses in Neurobiology, see Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates

Neurosciences

For courses in neurosciences, see Biology, Psychology, and the Neurosciences Program.

Neurosciences Program

Associate Professor Meck and Associate Professor Nowicki, *Co-directors*

The study of the nervous system has developed into one of the most exciting areas of modern science with rapidly expanding knowledge in both basic and medically applied areas. The Neurosciences Program offers the student guidance in planning a liberal arts education in the context of a structured emphasis on study in the neural sciences. The program especially encourages and facilitates undergraduate research participation, through independent study courses, in neuroscience laboratories across the university, including the Medical School Graduate School Basic Sciences Department of Neurobiology. The program also sponsors special lectures, workshops, and research mini-symposia throughout the academic year designed to foster undergraduate interest in neurobiology.

Students may participate in the Neurosciences Program in one of three ways: (1) as biology majors with a neuroscience concentration in biology, (2) as psychology majors with a neuroscience concentration in psychology, or (3) as majors in other departments, by completing a sequence of required courses for a Neurosciences Program certificate. Two core courses, described below, are required for each of these options. Further, each option specifies a number of neuroscience electives, including independent study research courses, that are to be completed as part of the student's primary major. See Biology and Psychology for descriptions of neuroscience areas of concentration within these majors. Further details on the Neurosciences Program and neuroscience areas of concentration may be obtained from either of the codirectors at the program office.

Core Courses

Psychology 91. Biological Bases of Behavior: Introduction and Survey. Physiological, developmental, and evolutionary approaches to behavior. Sensory and cognitive processes, sleep, pain, emotion, hunger, and thirst as well as maternal and sexual behavior patterns. Students required to participate as subjects in three to six hours of psychological research if not done in a previous introductory class. Prerequisite: Biology 14L, 19, or 25L; may be taken concurrently. One course. *C. Erickson, C. Williams or staff*

Biology 154. Principles of Neurobiology. Introduction to neuroscience, including basic physiology, microstructure, and anatomy of neural tissues; mechanisms of neuronal development and integration; sensory-motor control; the neural foundations of animal behavior, and the evolution of nervous systems. Prerequisites: Biology 25L or Biology 14L; and Chemistry 12L or equivalent. C-L: Neurobiology 154 and Psychology 135. One course. *LaMantia or staff*

Elective Courses

The following is a partial listing of representative elective courses. For descriptions, consult the listings under specified departments in the undergraduate and graduate bulletins.

Developmental and Comparative Anatomy of Vertebrates. (Biology 108L.) *Staff*
Biochemistry of Marine Animals. (Biology 1155L.) *Rittschof*
Animal Behavior. (Biology 201L, S.) *Klopfer*
Marine Animal Navigation. (Biology 296.22S.) *Forward*
Animal Communication. (Biology 296.22S.) *Nowicki*
Learning and Adaptive Behavior. (Psychology 111.) *Higa*
Comparative Psychology. (Psychology 120.) *Holland*
Behavior and Neurochemistry. (Psychology 126.) *Meck*
Fundamental Issues in the Study of the Brain. (Psychology 133.) *W. C. Hall*
Psychobiology of Motivation. (Psychology 139.) *Staff*
Methods in Behavioral Neurobiology. (Psychology 149S.) *W. G. Hall or staff*
Hormones and Behavior. (Psychology 150S.) *Williams*
Neurobiology of Learning and Memory. (Psychology 165S.) *Swartzwelder*
Brain Mechanisms of Behavior (Psychology 167S). *R. Erickson*
Research Methods in Animal Learning. (Psychology 181C). *Higa*
Neural Networks and Psychology. (Psychology 182C). *Schmajuk*
Independent Study. (Biology 191, 192 and Psychology 191, 192, 193, 194.) *Staff*

Cellular Neurobiology. (Neurobiology 208.) *Augustine, Kauer, Lo, and Reinhart*
Systems Neurobiology. (Neurobiology 209.) *Cant, Fitzpatrick, Nicoletis, and Purves*
Developmental Neurobiology. (Neurobiology 211.) *Katz, LaMantia, Matthew, and Skene*
Molecular Neurobiology. (Neurobiology 212.) *Chikaraishi and staff*

North American Studies Courses (NAS)

110. Introduction to North America. (CZ, SS) The geography, history, politics, economics, and cultural productions of Canada, the United States, and Mexico, with some reference to the Caribbean. C-L: Cultural Anthropology 129, Economics 115, History 108F, Political Science 119, Public Policy Studies 115, Romance Studies 125, and Sociology 109. One course. *Shanahan*

283S. Seminar in North American Studies. (CZ) Comparative topics varying from semester to semester. C-L: Cultural Anthropology 283S, History 283S, Political Science 285S, Public Policy Studies 282S, Romance Studies 283S, and Sociology 283S. One course. *Staff*

Pathology

For courses in pathology, see Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates.

Pharmacology

For courses in pharmacology, see Medicine (School)—Graduate (School) Basic Science Courses Open to Undergraduates.

Persian

For courses in Persian, see Asian and African Languages and Literature.

Philosophy (PHL)

Professor Flanagan, *Chair*; Professor Mahoney, *Director of Undergraduate Studies*; Professors Brandon, Golding, Joy, MacIntyre, and Sanford; Associate Professors Ferejohn, Schmaltz, Posy, and Stone (law); Assistant Professors Cooper and Güzeldere; Professors Emeriti Peach and Welsh; Adjunct Associate Professor Ward

A major or minor is available in this department.

The undergraduate program in the Department of Philosophy acquaints students with the content and the structure of philosophical theory in various areas. Discussion is encouraged so that students can engage actively in the philosophical examination of problems.

Course offerings fall into two general categories: the systematic and the historical. In a systematic treatment, the organization of a course is primarily in terms of the problems presented by the subject matter of that course, as in logic, ethics, and metaphysics. In historical courses, attention is directed more to the order of development in the thought of a particular philosopher (Plato, Aristotle, Kant) or in a historical period. In all courses, reading of the works of philosophers acquaints the students with the important and influential contributions to the definition and solution of philosophical issues.

The problems raised in philosophy in respect to the various fields of the arts and sciences involve questions that are not normally given attention in those particular disciplines. In the consideration of such problems, therefore, it is expected that students will acquire some understanding and perspective of the major areas of the human intellectual endeavor. In this sense, philosophical comprehension is an essential part of a student's learning and education.

Philosophy provides a sound preparation for the demands of many professions. For example, the precision of argument and broad acquaintance with intellectual traditions

emphasized in philosophy form an excellent basis for the study of law. Only one course from among Philosophy 41, 42, 43S, and 44S may be taken for credit. These courses are not open to juniors and seniors.

41. Introduction to Philosophy. (CZ) Examination of problems in philosophy; emphasis on metaphysics and theory of knowledge. One course. *Staff*

42. Introduction to Philosophy. (CZ) Examination of problems in philosophy; emphasis on ethics and value theory. One course. *Staff*

43S. Introduction to Philosophy. (CZ) Philosophy 41 conducted as a seminar. One course. *Staff*

44S. Introduction to Philosophy. (CZ) Philosophy 42 conducted as a seminar. One course. *Staff*

48. Logic. (CZ) The conditions of effective thinking and clear communication. Examination of the basic principles of deductive reasoning. One course. *Brandon, Posy, Sanford, or staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

100. History of Ancient Philosophy. (CZ) The pre-Socratics, Socrates, Plato, Aristotle, and post-Aristotelian systems. Not open to students who have taken Classical Studies 93 or Philosophy 93. C-L: Classical Studies 100. One course. *Ferejohn or Mahoney*

101. History of Modern Philosophy. (CZ) Bacon, Hobbes, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. Not open to students who have taken Philosophy 94. One course. *Joy, Posy, or Schmaltz*

102. Aesthetics: The Philosophy of Art. (CZ) The concept of beauty, the work of art, the function of art, art and society, the analysis of a work of art, criticism in the arts. One course. *Ward*

103. Symbolic Logic. (CZ) Detailed analysis of deduction and of deductive systems. Open to sophomores by consent of instructor. C-L: Linguistics. One course. *Brandon or Posy*

104. Philosophy of Science. (CZ) The principal philosophical and methodological problems in contemporary science. One course. *Brandon, Cooper, or Güzeldere*

106. Philosophy of Law. (CZ) Natural law theory, legal positivism, legal realism, the relation of law and morality. One course. *Golding*

107. Political and Social Philosophy. (CZ) The fundamental principles of political and social organizations. One course. *Mahoney*

109. Philosophy of Language. (CZ) A philosophical analysis of problems arising in the study of language and symbolism. Topics include: theories of language, the nature of signs and symbols, theories of meaning, types of discourse (scientific, mathematical, poetic), definition, ambiguity, metaphor. C-L: Linguistics. One course. *Posy*

110. Knowledge and Certainty. (CZ) Problems in the theory of knowledge: conditions of knowledge, scepticism, perception, memory, induction, knowledge of other minds, and knowledge of necessary truths. One course. *Ferejohn or Sanford*

111. Appearance and Reality. (CZ) Problems in metaphysics: theories of existence, substance, universals, identity, space, time, causality, determinism and action, and the relation of mind and body. One course. *Ferejohn or Sanford*

112. Philosophy of Mind. (CZ) Such topics as mind and body, the nature of thought, perception, consciousness, personal identity, and other minds. The relevance of cognitive

psychology, neuroscience, and computer science to the philosophy of mind. One course. *Flanagan, Güzeldere, or Sanford*

115. Environmental Ethics. (CZ) Critical investigation of the goals of environmental policy and the values to which these goals give expression. Various "land health" issues such as biodiversity, ecosystem preservation, ecological restoration, agricultural practice, and pollution. One course. *Cooper*

116. Systematic Ethics. (CZ) Problems in moral philosophy: the nature of morality, ethical relativism, egoism, utilitarianism. Both historical and contemporary readings, with emphasis on the latter. One course. *Flanagan or Golding*

117. Ancient and Modern Ethical Theories. (CZ) The development of ethical thought in the West; the interaction between culture and ethical theory, with special reference to the Greek city-state, Roman law, the Renaissance, the Reformation, and the rise of modern science. Readings in the great ethical philosophers. Open only to undergraduates. One course. *Flanagan, Golding, or MacIntyre*

118. Philosophical Issues in Medical Ethics. (CZ) Ethical issues arising in connection with medical practice and research and medical technology. Definition of health and illness; experimentation and consent; genetic counseling and biological engineering; abortion, contraception, and sterilization; death and dying; codes of professional conduct; and the allocation of scarce medical resources. Prerequisites: for freshmen, previous philosophy course and consent of instructor. One course. *Brandon or Golding*

119. Medieval Philosophy. (CZ) Christian, Islamic, and Jewish philosophy from late antiquity to 1300. Special emphasis on historical influences and institutional developments. Nature and destiny of humans, existence and nature of God, problem of ethical norms, political philosophy. C-L: Medieval and Renaissance Studies. One course. *Mahoney*

120. Late Medieval and Renaissance Philosophy. (CZ) Problems of political authority and nature of the state, mysticism, humanism, critical trends, background of Galileo, and impact of the Reformation related to cultural and institutional changes. C-L: Medieval and Renaissance Studies. One course. *Mahoney*

122. Philosophical Issues in Feminism. (CZ) Issues in political and moral philosophy in their bearing on feminist concerns, including political equality and rights, preferential treatment, feminist and nonfeminist critiques of pornography, and the morality of abortion. C-L: Women's Studies. One course. *Staff*

123. Aristotle. (CZ) Survey of principal topics in Aristotelian philosophy. Areas of study include metaphysics, epistemology, philosophy of science, philosophy of language, ethics, and political philosophy. C-L: Classical Studies 113. One course. *Ferejohn*

124. Philosophy of Education. (CZ) Alternative models of the educational process and of the relationship between education and moral development. The ideal of the "educated individual": education vs. training. The ideal of liberal learning: its moral context and its presuppositions. The educational process and its institutional settings. Readings from Plato, Aristotle, Aquinas, Rousseau, Kant, Whitehead, and others. One course. *Ward*

125. Philosophy of Music. (CZ) The nature of music and its place in the arts. Emotion and meaning, creation and interpretation in music. Readings from a wide variety of sources. One course. *Ward*

126. Philosophy of Sport. (CZ) Play, sport, and game in western culture. Sport and leisure. Sport vs. athletics. The discipline of the body. Competition and the urge to win. The concept of the "team" and ideals of individual performance. Spectatorship. The amateur and the professional. One course. *Ward*

130. Philosophy of Religion. (CZ) Selected concepts and doctrines. One course. *Schmaltz*

131. Kant. (CZ) Immanuel Kant's philosophy, its background and influence. His early work in metaphysics and ethics and his mature philosophy of the "Critical Period" in which he wrote *The Critique of Pure Reason*, *The Critique of Practical Reason*, and *The Critique of Judgment*. Prerequisite: Philosophy 101. One course. *Posy*

132. Nineteenth-Century Philosophy. (CZ) Emphasis on Hegel, Marx, and Nietzsche. Open to undergraduates only. One course. *MacIntyre*

134. Existentialism. (CZ) Themes and approaches in existential philosophy. Selected writings of Kierkegaard, Tolstoy, Dostoevsky, Heidegger, and Sartre. Contemporary relevance of existentialist perspectives. One course. *Ward*

139. Twentieth-Century Continental Philosophy. (CZ) A critical and historical examination of movements in European philosophy such as existentialism, structuralism, post-structuralism, hermeneutics, and critical theory. Husserl, Heidegger, Sartre, Gadamer, Habermas, and Derrida: their views of language, history, and the problems of modern society. Open to undergraduates only. One course. *MacIntyre*

150. Logic and Its Applications. (QR) Prerequisite: a course in logic or consent of instructor. See C-L: Mathematics 188; also C-L: Computer Science 148. One course. *Staff*

191, 192, 193, 194. Independent Study. Directed reading and research. Open only to highly qualified students in the junior and senior year with consent of the department. One course each. *Staff*

195. Special Topics in Philosophy. One course. *Staff*

196S, 197S, 198S, 199S. Seminars in Philosophy. (CZ) One course each. *Staff*

For Seniors and Graduates

203S. Contemporary Ethical Theories. (CZ, SS) The nature and justification of basic ethical concepts in the light of the chief ethical theories of twentieth-century British and American philosophers. Consent of instructor required. C-L: Political Science 289S. One course. *Flanagan, Golding, or MacIntyre*

206S. Responsibility. (CZ) The relationship between responsibility in the law and moral blameworthiness; excuses and defenses; the roles of such concepts as act, intention, motive, ignorance, and causation. One course. *Golding*

208S. Political Values. (CZ) Analysis of the systematic justification of political principles and the political values in the administration of law. One course. *Golding*

211S. Plato. (CZ) Selected dialogues. C-L: Classical Studies 211S. One course. *Ferejohn*

217S. Aristotle. (CZ) Selected topics. C-L: Classical Studies 217S. One course. *Ferejohn*

218S. Medieval Philosophy. (CZ) Selected problems. C-L: Medieval and Renaissance Studies. One course. *Mahoney*

219S. Late Medieval and Renaissance Philosophy. (CZ) Selected problems. C-L: Medieval and Renaissance Studies. One course. *Mahoney*

225S. British Empiricism. (CZ) A critical study of the writings of Locke, Berkeley, or Hume with special emphasis on problems in the theory of knowledge. One course. *Schmaltz*

227S. Continental Rationalism. (CZ) A critical study of the writings of Descartes, Spinoza, or Leibniz with special emphasis on problems in the theory of knowledge and metaphysics. One course. *Schmaltz*

228S. Recent and Contemporary Philosophy. (CZ) A critical study of some contemporary movements, with special emphasis on analytic philosophers. C-L: Linguistics. One course. *Posy*

231S. Kant's Critique of Pure Reason. (CZ) One course. *Posy*

232S. Recent Continental Philosophy. Selected topics. One course. *Joy*

233S. Methodology of the Empirical Sciences. (CZ) Recent philosophical discussion of the concept of a scientific explanation, the nature of laws, theory and observation, probability and induction, and other topics. Consent of instructor required. One course. *Brandon or Cooper*

234S. Problems in the Philosophy of Biology. (NS) Selected topics, with emphasis on evolutionary biology: the structure of evolutionary theory, adaptation, teleological or teleonomic explanations in biology, reductionism and organicism, the units of selection, and sociobiology. Consent of instructor required. C-L: Biology 234S. One course. *Brandon*

235S. Nineteenth-Century German Philosophy. (CZ) A critical examination of the writings of Hegel, Marx, or Nietzsche. One course. *Staff*

240S. Philosophical Psychology. (CZ) A study of recent work on the nature of the self and the nature and function of consciousness. Work from philosophy, psychology, cognitive neuroscience, and evolutionary biology will be discussed. One course. *Flanagan*

250S. Topics in Formal Philosophy. (CZ) Topics selected from formal logic, philosophy of mathematics, philosophy of logic, or philosophy of language. C-L: Linguistics. One course. *Posy*

251S. Epistemology. (CZ) Selected topics in the theory of knowledge; for example, conditions of knowledge, scepticism and certainty, perception, memory, knowledge of other minds, and knowledge of necessary truths. One course. *Sanford*

252S. Metaphysics. (CZ) Selected topics: substance, qualities and universals, identity, space, time, causation, and determinism. One course. *Sanford*

253S. Philosophy of Mind. (CZ) Analysis of concepts such as thought and belief; issues such as mind-body relations, thought and action, the nature of persons and personal identity. One course. *Flanagan, Güzeldere, or Sanford*

273S. Heidegger. (CZ, SS) See C-L: Political Science 273S. One course. *Gillespie*

289S. Environmental Ethics. (CZ) Selected topics involving values and the environment, for example, extending morality to nature, rights of future generations, environmental aesthetics, diversity and stability, ideological biases in ecological knowledge. Consent of instructor required. C-L: Environment 282S. One course. *Cooper*

291S, 292S. Special Fields of Philosophy. (CZ) One course each. *Staff*

COURSES CURRENTLY UNSCHEDULED

105. Philosophy of History. (CZ)

108. Social Ideals and Utopias. (CZ)

113. Philosophy of Mathematics. (CZ)

114D. Hellenistic Philosophy. (CZ)

121. Philosophy and Film. (CZ)

135. Philosophy in Literature. (CZ)

138. Analytic Philosophy in the Twentieth Century. (CZ)

202S. Aesthetics: The Philosophy of Art. (CZ)

204S. Philosophy of Law. (CZ)

205S. Philosophy of History. (CZ)

210. Logic for Computer Science. (QR)
254S. Topics in Philosophy of Religion. (CZ)

THE MAJOR

Requirements. Ten courses in philosophy, eight of which must be at the 100 level or above. The courses must include Philosophy 100 and 101; a course at the 100 level or above in value theory (for example, ethics, political philosophy); and at least one seminar at the 200 level. In addition, a course in logic (Philosophy 48) is highly recommended.

Honors/Distinction

The department offers work leading to graduation with distinction. See the section on honors in this bulletin.

THE MINOR

Requirements. At least five courses, no more than two of which may be below the 100 level. No specific courses are required. All students who wish to pursue a minor are encouraged to seek advice from faculty members in the department.

Physics (PHY)

Professor Evans, *Chair*; Professor Goshaw, *Director of Undergraduate Studies*; Professors Behringer, Bilpuch, Fortney, Han, Johnson, Madey, Müller, Palmer, Roberson, Thomas, Walter, and Weller; Associate Professors Greenside, Howell, Litvinenko, Oh, and Teitsworth; Assistant Professors DeBraekeleer, Gauthier, Lee, Matveev, O'Shea, Socolar, and Springer; Professors Emeriti Meyer, Robinson, and Walker; Research Professor Tornow; Research Assistant Professor Phillips; Adjunct Professors Ciftan, Guenther, Iafrate, Rogosa, and Strosio; Adjunct Associate Professors Lawson and Skatrud; Adjunct Assistant Professors Everitt and Kolena; Visiting Assistant Professor Brown; Lecturer Haque

A major or a minor is available in this department.

Through the study of physics students learn the methods and results of a systematic examination of the objects that make up the natural universe and of their interactions with each other. The knowledge and analytical skills thus obtained are basic to the study of the sciences and engineering. The department offers a number of courses for nonspecialists who wish to learn about the physicist's description of nature for its intrinsic intellectual value.

21, 22. Introductory Physics. (NS) Credit for Advanced Placement on the basis of the College Board Examinations "Physics-C." One course each.

32. Physics from the Historical Perspective. (NS) The historical development of physical theories is traced from early theories of the solar system to relativity and quantum theory. No previous study of physics is assumed, but the student must be able to use simple mathematics through basic algebra. One course. *Staff*

35. Conceptual Physics. (NS) Physical concepts relevant to common experience. Principles of mechanics, sound, electromagnetism, light, and microscopic structure, discussed with an emphasis on application to familiar phenomena and devices. Intended for persons not majoring in science or engineering; no previous knowledge of physics assumed. One course. *Socolar*

36. Acoustics and Music. (NS) The physical principles underlying musical instruments, room acoustics, and the human ear. Analysis, reproduction, and synthesis of musical sounds. No previous knowledge of physics is assumed. C-L: Music 36. One course. *Lawson*

41L, 42L. Fundamentals of Physics. (NS) For students interested in majoring in physics; taken in the freshman year. Basic principles of physics, mainly classical, at a level similar to Physics 51L, 52L, but with emphasis on laying a foundation for further study. Lecture, recitations, and laboratory. Closed to students having credit for Physics 51L, 52L. Prerequisites: consent of director of undergraduate studies; Mathematics 31 and 32 may be taken concurrently. One course each. *Goshaw or Roberson*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

51L, 52L. Introductory Technical Physics. (NS) A survey of the principles of classical physics, intended principally for students in the physical sciences and engineering. Students planning a major in physics should enroll instead in Physics 41L, 42L in their freshman year. Physics 51L is closed to students having credit for Physics 41L or Physics 53L; Physics 52L is closed to students having credit for Physics 42L or Physics 54L. Prerequisite: Mathematics 31, 32 or equivalent; Mathematics 32 may be taken concurrently with Physics 51L; for 52L: Physics 51L or 53L. One course each. *Staff*

53L, 54L. General Physics. (NS) A survey of the principles of physics, intended mainly for students planning study in medicine or the life sciences. The level and coverage are similar to that of Physics 51L, 52L, but there are differences in emphasis. Physics 53L is closed to students having credit for Physics 41L or Physics 51L; Physics 54L is closed to students having credit for Physics 42L or Physics 52L. Prerequisite: Mathematics 31, 32 or 25L, 26L, or equivalent; Mathematics 32 may be taken concurrently with Physics 53L; for 54L: Physics 51L or 53L. One course each. *Staff*

55. Introduction to Astronomy. (NS) The evolving theory of the physical universe. Cosmological models, galaxies, stars, interstellar matter, the solar system, and experimental techniques and results. Several observatory sessions. One course. *Everitt*

100. Introduction to Modern Physics. (NS) Survey of modern physics including relativity and the quantum physics of atoms, nuclei, particles, and quarks. Not applicable toward a major in physics. Prerequisites: Physics 42L, 52L, or 54L and Mathematics 103 (may be taken concurrently). One course. *Han*

105. Introduction to Astrophysics. (NS) Basic principles of astronomy treated quantitatively. Cosmological models, galaxies, stars, interstellar matter, the solar system, and experimental techniques and results. Prerequisites: Mathematics 31 and Physics 42L, 52L, 54L or consent of instructor. One course. *Kolena*

143L. Optics and Modern Physics. (NS) Intended as a continuation of Physics 41L, 42L. Classical wave and ray optics. Introduction to quantum physics. Prerequisites: Physics 42L, 52L, or 54L and Mathematics 103 (may be taken concurrently). One course. *Gauthier*

Physics 42L, 52L, or 54L or equivalent, and Mathematics 103 or equivalent are prerequisites to all of the following courses.

171L. Electronics. (NS) Elements of electronics including circuits, transfer functions, solid-state devices, transistor circuits, operational amplifier applications, digital circuits, and computer interfaces. Lectures and laboratory. One course. *Fortney*

176. Thermal Physics. (NS) Thermal properties of matter treated using the basic concepts of entropy, temperature, chemical potential, partition function, and free energy. Topics include the laws of thermodynamics, ideal gases, thermal radiation and electrical noise, heat engines, Fermi-Dirac and Bose-Einstein distributions, semiconductor statistics, kinetic theory, and phase transformations. Prerequisites: Mathematics 103 or equivalent and Physics 51L, 52L or equivalent. C-L: Electrical Engineering 176. One course. *Socular*

181. Introductory Mechanics. (NS) Newtonian mechanics at the intermediate level, Lagrangian mechanics, linear oscillations, special relativity. Prerequisite: Mathematics 111 or equivalent (may be taken concurrently). One course. *Gauthier*

182. Electricity and Magnetism. (NS) Electrostatic fields and potentials, boundary value problems, magnetic induction, energy in electromagnetic fields, Maxwell's equations, introduction to electromagnetic radiation. Prerequisite: Mathematics 111 or equivalent. One course. *Evans*

185. Modern Optics I. (NS) Optical processes including the propagation of light, coherence, interference, and diffraction. Consideration of the optical properties of solids with applications of these concepts to lasers and modern optical devices. Lecture and laboratory projects. C-L: Electrical Engineering 274. One course. *Guenther*

191, 192. Independent Study. Consent of instructor required. One course each. *Staff*

For Seniors and Graduates

205. Introduction to Nuclear Physics. (NS) Phenomenological aspects of nuclear physics, interaction of gamma radiation and charged particles with matter, nuclear detectors, particle accelerators, radioactivity, basic properties of nuclei, nuclear systematics, nuclear reactions, particle scattering, nuclear models of the deuteron, nuclear forces, parity. One course. *Weller*

211. Fundamentals of Quantum Mechanics. (NS) Waves and particles, Schrödinger equation, Dirac notation and mathematical tools, fundamental postulates, angular momentum and addition of angular momentum, applications to spin systems, harmonic oscillators, and the hydrogen atom. Prerequisites: Mathematics 111 and Physics 181. One course. *Springer*

212. Applications of Quantum Mechanics. (NS) Application of the fundamental postulates to atomic structure and spectra, solid state phenomena, statistical physics, scattering, perturbative techniques, treatment of systems of identical particles, and nuclear and particle physics phenomenology. Prerequisite: Physics 211. One course. *Springer*

213. Nonlinear Dynamics. (QR) Prerequisites: Computer Science 8 or 53, Mathematics 111, and Physics 51L, 52L. See C-L: Computer Science 264. One course. *Behringer or Greenside*

214. Introduction to Solid-State Physics. (NS) Discussion of solid-state phenomena including crystalline structures, X-ray and particle diffraction in crystals, lattice dynamics, free electron theory of metals, energy bands, and superconductivity, with emphasis on understanding electrical and optical properties of solids. Prerequisite: quantum physics at the level of Physics 143L or Electrical Engineering 211. C-L: Electrical Engineering 214. One course. *Daniels-Race or Teitsworth*

217S. Advanced Physics Laboratory and Seminar. (NS) Experiments involving the fields of electricity, magnetism, heat, optics, and modern physics. One course. *Meyer*

222S. General Relativity. (NS) Review of special relativity; ideas of general relativity; mathematics of curved space-time; formation of a geometric theory of gravity; Einstein field equation applied to problems such as the cosmological red-shift and blackholes. Prerequisites: Physics 181 and Mathematics 111 or equivalents. One course. *Lee*

225, 226. Elementary Investigations. (NS) Training in the laboratory and library methods of physical research. Qualified students may conduct elementary investigations under the supervision of a member of the staff. One course each. *Staff*

230. Mathematical Methods in Physics. (QR) Includes topics in complex analysis, residue calculus, infinite series, integration, special functions, Fourier series and transforms,

delta functions, and ordinary differential equations; and use of MATHEMATICA for graphical, symbolic, and numerical computation. Prerequisite: Mathematics 111. One course. *Palmer*

231. Mathematical Methods in Electromagnetism. (NS) Mathematical topics include vector calculus, curvilinear coordinates, partial differential equations, orthogonal functions, Legendre polynomials, spherical harmonics, Bessel functions, and Green's functions. Topics from electromagnetism include Maxwell's equations, electrostatics, magnetostatics, potential theory, boundary-value problems, macroscopic media, and electromagnetic waves. Uses MATHEMATICA. Prerequisite: Physics 230. One course. *Palmer*

244. Nuclear and Particle Physics. (NS) Current ideas and models in nuclear and particle physics. Experimental methods; nuclear structure; nuclear reactions; families of elementary particles; quarks and gluons; weak interactions. Prerequisite: Physics 211. One course. *Staff*

261. Laser Physics. (NS) Laser physics and laser theory. Electromagnetic radiation and its interaction with matter. Laser excitation, oscillation, modulation, and detection theory. Prerequisites: Electrical Engineering 170L or Physics 182 and Electrical Engineering 211 or Physics 211. C-L: Electrical Engineering 276. One course. *Skatrud*

281. Classical Mechanics. (NS) Newtonian, Lagrangian, and Hamiltonian methods for classical systems; symmetry and conservation laws; rigid body motion; normal modes and forced oscillations; small nonlinear oscillations; canonical transformations; Hamiltonian chaos. One course. *Socular*

291S. Physics at the Cutting Edge. (NS) Introduction, for graduates and advanced undergraduates, to research topics at the core of recent advances in physics. Prerequisites: Physics 181, 182, and 211, or equivalents. One course. *O'Shea and Springer*

COURSES CURRENTLY UNSCHEDULED

102. Applications of Modern Physics in Medicine. (NS)

106. Topics in Astrophysics. (NS)

186. Modern Optics II. (NS)

215. Principles of Quantum Theory. (NS)

240. Computer Applications to Physical Measurement. (NS)

271. Quantum Optics. (NS)

THE MAJOR

Students majoring in physics are prepared for work in industrial and governmental laboratories. They are also prepared for graduate work in physics or for the study of medicine. Students planning to major in physics should enroll in Physics 41L, 42L in their freshman year. They should also arrange to complete the necessary mathematics as soon as possible.

For the A.B. Degree

Prerequisites. Physics 41L, 42L or 51L, 52L or 53L, 54L, or equivalents; Mathematics 31, 32, 103, 111, or equivalents, and one additional course at the 100 or 200 level.

Major Requirements. Physics 143L, 176, 181, 211, either 171L or 217S, and one other course in physics above 100 except for Physics 230. (For the major, Physics 230 is considered to be a mathematics course.)

For the B.S. Degree

Prerequisites. Physics 41L, 42L or 51L, 52L or 53L, 54L, or equivalents; Mathematics 31, 32, 103, 111, or equivalents, and one additional course at the 100 or 200 level.

Major Requirements. Physics 143L, 176, 181, 182, 211, 212, two among the laboratory courses 171L, 217S, and 225, plus one other course in physics above 100 except for Physics 230. (Students planning graduate study in physics are urged to take on additional elective in physics and one in mathematics. (For the major, Physics 230 is considered to be a mathematics courses.)

Honors/Distinction

The department offers upperclassmen the possibility of being associated with research conducted in the department. This work may lead to graduation with distinction. See the section on honors in this bulletin.

THE MINOR

Requirements. Physics 41L and 42L, or 51L and 52L, or 53L and 54L, or equivalents; Physics 143L; plus two additional physics courses numbered above 100.

Polish

For courses in Polish, see Slavic Languages and Literatures.

Political Science (PS)

Professor Lange, *Chair*; Professor Holsti, *Director of Undergraduate Studies*; Professors Aldrich, Ascher, Fish, Gillespie, Grieco, Horowitz, Hough, Keohane, Kitschelt, Kornberg, MacIntyre, Mieckiewicz, Paletz, Price, and Spragens; Associate Professors Eldridge, Grant, Johns, McKean, and Niou; Assistant Professors Archer, Brehm, Coles, Feaver, Goemans, Gronke, Hamilton, Orr, Shi, and Stenner; Professors Emeriti Ball, Barber, Braibanti, Cleaveland, Hall, and Leach; Adjunct Professors Curtis, Kessler, and O'Barr

A major or a minor is available in this department.

Courses in political science for undergraduates are offered in four fields: (A) American government and politics; (B) comparative government and politics; (C-N) normative political theory/(C-E) empirical political theory and methodology; and (D) international relations, law, and politics. In the course descriptions below the field within which the course falls is indicated by the appropriate letter symbol (A, B, C-N/C-E, D) after the course title. (The area of knowledge designation follows.) Courses numbered from 91 through 94 serve as an introduction both to the study of political science and to the subject matter and approaches of the relevant field. Middle and upper-level courses and seminars (numbered at the 100 and 200 levels respectively) consider in depth particular aspects and topics within the field. Topical introductory seminars are offered to freshmen (49S) and to freshmen and sophomores (60S). In addition, independent study under faculty supervision enables students to explore topics of special interest. See below, following the course descriptions, for the listing of courses by fields, information on internships, and requirements for the major, minor, and honors.

INTRODUCTORY COURSES

The following courses introduce the study of political science. Courses numbered 49S, 60S, and 91 through 94 serve as introductions to the discipline. Students ordinarily will take at least one of these courses before proceeding to more advanced courses. Some advanced courses may require a particular introductory course as a prerequisite.

21S. Problems in American Politics (A). (SS) Special topics course open only to first-year students. One course. *Staff*

22S. Problems in Comparative Politics (B). (SS) Special topics course open only to first-year students. One course. *Staff*

23S. Problems in Political Theory (C). (SS) Special topics course open only to first-year students. One course. *Staff*

24S. Problems in International Relations (D). (SS) Special topics course open only to first-year students. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

60S. Introductory Seminars in Political Science. (SS) Special topics courses open only to freshmen and sophomores.

A. American Government and Politics

B. Comparative Government and Politics

C. Political Theory

D. International Relations

One course. *Staff*

90A. American Government and Politics (A). (SS) Credit for Advanced Placement on the basis of the College Board examination in American government and politics. Does not satisfy course requirements of the political science major. One course.

90B. Comparative Government and Politics (B). (SS) Credit for Advanced Placement on the basis of the College Board examination in comparative government and politics. Does not satisfy course requirements of the political science major. One course.

91. The American Political System (A). (SS) Theory and practice of American government and politics; federal-state relations; the separation and interrelationships of the executive, legislative, and judicial branches of government; judicial review; the role of political parties and public opinion; the formulation and execution of domestic and foreign policy; civil liberties. One course. *Staff*

91D. The American Political System (A). (SS) Same as Political Science 91 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Staff*

92. Comparative Politics (B). (SS) Different types of political systems, their origins and evolution; basis of authority under totalitarian, authoritarian, liberal, and social democratic polities; problems in developing political authority, especially in poor countries via revolution, populism, nationalism, or authoritarianism. C-L: Comparative Area Studies. One course. *Archer*

92D. Comparative Politics (B). (SS) Same as Political Science 92 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Archer*

93. Elements of International Relations (D). (SS) The nature of international politics, the analysis of national power, the instruments of foreign policy, and the controls of state behavior. One course. *Staff*

93D. Elements of International Relations (D). (SS) Same as Political Science 93 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Eldridge or Feaver*

94. Contemporary Political Ideologies (C-N). (SS) Liberalism, conservatism, socialism, fascism, and feminism. One course. *Staff*

94D. Contemporary Political Ideologies (C-N). (SS) Same as Political Science 94 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Staff*

98. Introduction to Canada. (SS) See C-L: Canadian Studies 98; also C-L: Comparative Area Studies, Economics 98, History 98, and Sociology 98. One course. *Thompson*

COURSES TAUGHT IN DUKE STUDY ABROAD PROGRAMS

100, A-V. Duke University Overseas Program. (SS) This number represents course credit for political science courses taken in Duke University Summer Session Study Abroad Programs or in Duke University semester or academic year programs with overseas universities. Register for program by designated suffix A through V. C-L: Comparative Area Studies. Variable credit.

100A. Duke Semester/Academic Year Program: Berlin. (FL, SS)

.01 Environmental Policy in Europe (B). (SS) One course.

.02 Germany of Today: An Ordinary Country? (D). (FL,SS)

Taught in German. One course. C-L: Comparative Area Studies. Variable credit.

100C. Duke Summer Program: Zimbabwe/Botswana. (SS)

.01 Politics and Literature in Southern Africa (B). One course.

.02 Issues of Development and Dependence in Botswana and Zimbabwe (D).

One course. C-L: African and African-American Studies 100 and Comparative Area Studies. Variable credit.

100E. Duke Summer Program: London. (SS) .01 Media and Politics in Britain (B). C-L: Comparative Area Studies. Two courses.

100J. Duke Wind Symphony Semester Program: Vienna. (SS) .01 Government and Politics of Austria in Europe (B). C-L: Comparative Area Studies. One course.

100K. Duke Summer Program: London/Cambridge/Edinburgh. (SS)

.01 Anglo-American Constitutionalism, Law, and Legal Institutions (A). One course.

.02 British Government and Constitutional Law (B).

One course. C-L: Comparative Area Studies. Variable credit.

100L, S. Duke Summer Program: Oxford. (SS)

.01 Political System of Modern Britain (B). Two courses.

.02 Law and Liability: Personal Injury in Britain and the United States (B).

Two courses. C-L: Comparative Area Studies. Variable credit.

100M. Duke Summer Program: Spain. (SS) .01 Government and Politics of Spain (B). Not open to students who have taken Political Science 117: Comparative Government and Politics: Spain. C-L: Comparative Area Studies. One course.

100Q. Duke Semester/Academic Year Program: France. (FL, SS) .01 Introduction to Islam and to Problems in the Middle East (B). C-L: Comparative Area Studies. One course.

100U. Duke Summer Program: Korea-Taiwan I. (SS) .01 Comparative Analysis of Democratic Institutions in East Asia (B). Analysis of the selection and consequences of democratic political institutions in East Asian countries. Topics include electoral systems, districting and timing of elections, presidential and parliamentary systems of executive responsibility, structure of the legislature, formation of parties and governing coalitions, federalism, term limits, plebiscites, constitutional amendments. C-L: Comparative Area Studies. One course.

100V. Duke Summer Program: Korea-Taiwan II. (SS) .01 East Asian Political Economy: Institutions, Networks, and Politics (B). See C-L: Sociology 188C; also C-L: Comparative Area Studies and Public Policy Studies 100A. One course.

OTHER UNDERGRADUATE COURSES

101A. S. Issues in Twentieth-Century American Political Practice (A). (SS) Seminar on the nature of American government. Selected contemporary problems and institutions. Open only to students in the Twentieth-Century America (FOCUS) Program. One course. *Staff*

101C. S. Issues in Twentieth-Century American Political Theory (C-N). (SS) Seminar on contemporary issues of American political thought. Attempts to refurbish or develop alternatives to the dominant liberal tradition. Open only to students in the Twentieth-Century America (FOCUS) Program. One course. *Staff*

102. Comparative Analysis of Democratic Institutions (B). (SS) The selection and consequences of democratic political institutions with special emphasis on electoral systems and constitutions. One course. *Niou*

103A. Introduction to Urban Politics (A). (SS) Theory and practice of American city politics: relationships between governmental structures and historical development; distribution of power; constituency demands. One course. *Orr*

103B. Urban Poverty and the Urban Underclass (A). (SS) The nature and extent of poverty in America's big cities. The causes and consequences of urban poverty and efforts by the national and subnational governments to address them. Particular attention paid to problems and prospects of the working poor and the so-called urban underclass. Heavy focus on survey, ethnographic, and hypotheses advanced to explain the current situation of the urban poor. C-L: African and African-American Studies 148. One course. *Orr*

104. Politics and Literature (C-N). (SS) The enduring questions of politics and political philosophy illustrated in Western literature: historical, literary, and philosophical analysis. One course. *Gillespie or Grant*

105. The Politics of Democratization in Eastern Europe (B). (SS) Overview of political regimes in selected East European countries, comparative analysis of modes of transition to democracy: constitutionalism, party systems and voting, private property rights and economic regulation under socialism and capitalism. One course. *Kitschelt*

106. International Security (D). (SS) International conflict in modern times. Causes and effects of war. Contemporary and future threats. One course. *Feaver*

106D. International Security (D). (SS) Same as Political Science 106 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Feaver*

107. Environmental Politics and Policies in the Industrial World (B). (SS) Comparative analysis of environmental problems, protest, preferred approaches, and policy mix chosen in politically diverse industrialized nations including the United States, Russia, Japan, and those in Europe. C-L: Comparative Area Studies and Public Policy Studies 107. One course. *McKean*

108. The American Presidency (A). (SS) The presidency and its impact on the American political system. One course. *Paletz*

108S. The American Presidency (A). (SS) Same as Political Science 108 except in seminar format. One course. *Staff*

109. State and Local Government Today (A). (SS) Problems in state, county, and city government. One course. *Orr*

110. American Political Parties (A). (SS) Introduction to party systems with application to the United States, including parties in the electorate, parties as organizations, and parties in government. One course. *Gronke*

111. Contemporary Japanese Politics (B). (SS) Introduction to political change in postwar Japan. Foundations of the modern industrial state, electoral politics, policy-making and bureaucracy, defense, foreign policy, and foreign trade. C-L: Comparative Area Studies. One course. *McKean*

113A. Issues of International Political Economy I: International Trade (D). (SS) An examination of international trade policy issues affecting relations among advanced industrial countries, between developed and developing countries, and between industrial and former socialist transitional economies, including the benefits of trade and the sources of trade protection, strategic trade policy, and new problems in trade diplomacy such as environmental and worker standards. Not open to students who have taken Political Science 113. One course. *Grieco*

113B. Issues of International Political Economy II: International Money and Finance (D). (SS) An examination of international monetary and financial policies of both advanced industrial states and developing countries, including the bases for international currency and capital markets, alternative international monetary systems, macroeconomic policy coordination, and the dynamics of debt and exchange rate crises. Not open to students who have taken Political Science 113. One course. *Grieco*

115. Politics and Society in Germany (B). (SS) Industrialization, democratization, and fascism in Germany; social structure, political institutions, and political culture; selected public policies; Germany in the world economy and in world politics. C-L: Comparative Area Studies. One course. *Kitschelt*

117. Comparative Government and Politics: Selected Countries (B). (SS) Special topics course treating the political system of one or more countries from a comparative perspective. One course. *Staff*

118. Ethnicity and American Foreign Policy (D). (SS) Ethnicity and its relation to foreign policy from the 1760s to the present. Focuses on the impact of the four great waves of immigration; 1760-1775, and 1880-1915, especially the impact of the latter on American policy before and after World War II. Also examines the impact of foreign policy on identity formation, particularly the merging of "hyphenated-Americans" from Europe into "Whites." One course. *Hough*

119. Introduction to North America (B). (CZ, SS) See C-L: North American Studies 110; also C-L: Cultural Anthropology 129, Economics 115, History 108F, Public Policy Studies 115, Romance Studies 125, and Sociology 109. One course. *Shanahan*

120. International Conflict and Violence (D). (SS) Nature and processes of international conflict and violence with emphasis on contemporary instances of violence in international affairs. Consideration of restraints on violence. One course. *Eldridge*

120S. International Conflict and Violence (D). (SS) Same as Political Science 120 except in seminar format. One course. *Staff*

122. Foundations of Modern International Politics (D). (SS) Interactions between domestic politics and foreign policy-making and their effects on international relations. Problems, institutions, and processes studied under varied methodologies. No prerequisite, but Political Science 93 recommended. One course. *Eldridge or Goemans*

123. Introduction to Political Philosophy (C-N). (SS) The nature and enduring problems of political philosophy, illustrated by selected theorists in the Western political tradition. One course. *Staff*

125. Comparative Approaches to Global Issues (B). (SS) Not open to students who have taken Religion 121. See C-L: Comparative Area Studies 125; also C-L: Cultural Anthropology 125, History 137, Religion 183, and Sociology 125. One course. *Staff*

126. Theories of Liberal Democracy (C-N). (SS) Critical discussion of classic theorists, such as Locke, Rousseau, Mill, and Madison, and contemporary theories of liberal democracy. One course. *Grant or Spragens*

127. Law and Politics (A). (SS) Nature and functions of law; Anglo-American legal institutions; the process of judicial decision making; and the relationships among judges, lawyers, legislators, and administrators in the development of public as well as private law. One course. *Fish*

128. Politics of the Executive Branch (A). (SS) Policy-making in the executive branch of government: office of the president, cabinet, and independent agencies. Emphasis on relations with Congress and the courts. One course. *Staff*

131. Introduction to American Political Thought (C-N). (SS) Basic elements in the American political tradition as developed from its English roots to the present. One course. *Grant or Spragens*

132. Politics of Asia (B). (SS) The impact of nationalism, development, and revolution on traditional Asian society and its emerging states. C-L: Comparative Area Studies. One course. *Staff*

133. Japanese Foreign Relations (D). (SS) Japan's increasing world role; emphasis on economic foreign policy and United States-Japanese relations. C-L: Comparative Area Studies. One course. *McKean*

134. Legislative and Party Systems in Western Democracies (B). (SS) Comparative analyses of political parties and legislatures in several western democracies, including the United States, Canada, Great Britain, and other countries. One course. *Kornberg*

136. Comparative Government and Politics: Western Europe (B). (SS) Modern political institutions and processes of European democracies: political parties, interest groups and parliaments; regional, religious, and class divisions; political participation and mobilization; relationships of state, society and economy; political, social and economic change in postwar Europe. C-L: Comparative Area Studies. One course. *Kitschelt or Lange*

136D. Comparative Government and Politics: Western Europe (B). (SS) Same as Political Science 136 except instruction is provided in two lectures and one small discussion meeting each week. C-L: Comparative Area Studies. One course. *Kitschelt or Lange*

137. Campaigns and Elections (A). (SS) An introduction to voting and elections in the United States, with emphasis on presidential nomination and election procedures, characteristics of the American electorate, and theories of voting behavior in presidential and congressional elections. One course. *Aldrich, Brehm, or Gronke*

137D. Campaigns and Elections (A). (SS) Same as Political Science 137 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Aldrich, Brehm, or Gronke*

138. Quantitative Political Analysis I (C-E). (QR) Basic applications of statistical methods to the analysis of political phenomena. Emphasis on research design, graphical display, probability, testing of hypotheses, statistical inference, and the use of computers. One course. *Brehm*

138D. Quantitative Political Analysis I (C-E). (QR) Same as Political Science 138 except instruction provided in two lectures and one small discussion meeting each week. One course. *Brehm*

139. Conflict, Collusion, and Cooperation (C-E). (SS) How actors in the political process manipulate information, institutions, and strategies to produce preferred outcomes. Applications to elections, legislative behavior, international conflict, and other areas. One course. *Niou*

140. Feminist Theory (C-N). (SS) Exploration of contemporary American feminist thought challenging traditional forms of power and the relationship between public and private reason and unreason. Included are works by liberal, radical, lesbian, and socialist feminists as well as works which address issues of concern specific to women of color. One course. *Staff*

141. Introduction to African-American Politics (A). (SS) Traces the history, evolution, and maturation of the African-American political experience in America from the colonial period through contemporary times. Impact of Afro-American political participation on the American political process and American public policy. C-L: African and African-American Studies 149. One course. *Orr*

142. War and Peace (D). (SS) The use of systems theory in comparative political history to explain why some international systems during particular periods have been plagued by war while others have been relatively peaceful. Special attention given to the Bismarckian system. One course. *Staff*

142S. War and Peace (D). (SS) Same as Political Science 142 except in seminar format. One course. *Staff*

145. Political Analysis for Public Policy-Making (A). (SS) Prerequisite: Political Science 90A, 91, 101, or equivalent. See C-L: Public Policy Studies 114. One course. *Ascher, Hamilton, Mayer, Mickiewicz, or Miller*

146D. American Legislative Behavior (A). (SS) An introduction to the American legislative process, with specific focus on the U.S. Congress. Emphasis on legislative rules and procedures, congressional elections, and the behavior of legislators in their representative and policy-making roles. One course. *Gronke*

147. Environmental Politics and Policies in the Developing World (B). (SS) Problems of sustainable development and early industrialization in the Third World; special focus on land use, agriculture, deforestation, desertification, wildlife, water, and population growth, Third World cities, early industrialization, and aid for development projects. C-L: Comparative Area Studies and Public Policy Studies 147. One course. *McKean or Miranda*

148D. Environmental Politics Beyond Borders (D). (SS) International environmental problems and politics, from transboundary pollution (for example, acid rain, international rivers) to degradation of global commons (global warming, biodiversity, ozone, overfishing, and pollution of the high seas). Includes issues of trade, investment, debt, and transnational corporations. C-L: Comparative Area Studies and Public Policy Studies 143D. One course. *McKean*

150S. The Individual and Society: The Classical View (C-N). (CZ) Ancient political philosophy and drama emphasizing the case of Socrates. Readings include Plato's *Republic*, *Apology*, and *Crito*; Aristophanes' *The Clouds*; Sophocles' *Antigone*. C-L: Classical Studies 157S. One course. *Grant*

151. Introduction to Latin American Politics (B). (SS) Historical and cultural context of political institutions and behavior, the role of traditional and emerging groups and forces,

political instability and the decision-making process. C-L: Comparative Area Studies. One course. *Archer*

151A. Introduction to Latin American Politics (B). (FL, SS) Same as Political Science 151 except taught in Spanish. C-L: Comparative Area Studies. One course. *Archer*

151D. Introduction to Latin American Politics (B). (SS) Same as Political Science 151 except taught with two lectures and one discussion group. C-L: Comparative Area Studies. One course. *Archer*

153, 154. Politics and the Media of Mass Communication 153 (B), 154 (A). (SS) Analysis of the nature, organization, and products of the mass media (especially the movie, television, and newspaper industries) as they affect the political systems, political processes, institutions, and people of the United States and other nations. Open to juniors and seniors. It is desirable but not required that students taking 153 continue with 154. With consent of the instructor, students who have not taken 153 may enroll in 154. C-L: Comparative Area Studies; Film and Video; and Women's Studies. One course each. *Paletz*

155. The Politics and Economics of Developing Areas (B). (SS) Process and politics of transition of rural and agrarian societies to urban and industrial societies: Soviet Union, United States, India, Africa, and Asia. C-L: Comparative Area Studies. One course. *Staff*

156S. American Communities: A Documentary Video Approach. (AL, SS) Prerequisites: English 101A and any one of the following: Film and Video 100S, 101S, or 104S. See C-L: Film and Video 105S; also C-L: Cultural Anthropology 134S, History 150B, and Public Policy Studies 105S. One course. *Staff*

157D. Foreign Policy of the United States (D). (SS) Sources of American foreign policy, containment, international economic policy, deterrence, arms control, and disarmament. Prospects for the future. Emphasis on the period since World War II. One course. *Holsti*

158. Transnational Relations and the Politics of Interdependence (D). (SS) The transformation of the world political economy since World War II as a result of the increased number, site, and scope of non-state actors (such as global firms and transnational social movements), and the unprecedented expansion of trade and integration of capital markets. Links between the world political economy and domestic politics. One course. *R. Keohane*

158D. Transnational Relations and the Politics of Interdependence (D). (SS) Same as Political Science 158 except instruction is provided in two lectures and one small discussion meeting each week. One course. *R. Keohane*

159. Ambition and Politics (C-N). (SS) A theoretical examination of the role of ambition in politics, including works by or on Homer, Plato, Plutarch, Machiavelli, Shakespeare, Tocqueville, Nietzsche, and Hitler. One course. *Gillespie*

160. Contemporary Global Issues (D). (SS) See C-L: Comparative Area Studies 109; also C-L: Cultural Anthropology 109, History 109, and Sociology 175. One course. *Staff*

164. Political Organizations (A). (SS) Using classical organization theory and research on decision-making behavior of the members of political organizations to study those organizations (such as political parties, labor unions, businesses, and public bureaucracies). One course. *Brehm*

165. Politics and Foreign Policy of Russia (B). (SS) The Communist experience in historical perspective and of Russian democratization, economic reform, and foreign policy. C-L: Comparative Area Studies. One course. *Hough*

167. International Law (D). (SS) Introduction to the main concepts and themes in public international law. The role of states and international organizations in international law,

treaties, the law of the sea, human rights, self-determination, and European integration. The sources of international law and its impact on state action. One course. *Staff*

167D. International Law (D). (SS) Same as Political Science 167 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Staff*

168. Analysis of Political Decision Making (C-E). (SS) Surveys of some of the most prominent problems, methods, ideas, and findings that have emerged in recent theoretical studies of politics. Intellectual puzzles, speculative models and normative and explanatory applications, individual decision theory, game theory, and social choice theory. Not open to students who have taken Political Science 139. One course. *Niou*

169. Chinese Politics (B). (SS) An introduction to the Communist revolution, the structure of the political system and political decision making in the People's Republic of China, the relations between state and society, and the political implications and consequences of reforms undertaken in the post-Mao era. One course. *Shi*

170. Europe Transformed (D). (SS) Transformation in intra-European relations since 1980. Topics covered: the Cold War and its termination in Europe, Warsaw Pact dissolution, new roles for NATO, European Community, and United States in Europe. C-L: Comparative Area Studies. One course. *Grieco*

171. From Apartheid to Democracy in South Africa (B). (SS) The South African political system in the twentieth century with particular attention to the transition from apartheid and white minority rule to nonracial democracy. C-L: African and African-American Studies 171 and Comparative Area Studies. One course. *Johns*

172. Introduction to the Politics of the Communist System (B). (SS) The development of the Communist Movement as a consequence of the Industrial Revolution. Marxist theories and some of the underlying structural and dynamic principles of Marxism-Leninist systems. Social, economic, and political transformations undertaken under the auspices of Stalin and Mao. Issues related to the reform of Marxist-Leninist systems. One course. *Shi*

173S. Political Economy of World Food Problems (B). (SS) Changing policies toward food production and distribution. Topics include American agricultural policy, international food and famine aid, and Third World agricultural development strategies. C-L: Comparative Area Studies. One course. *Johns*

175A. Political Philosophy and Distributive Justice (C-N). (SS) Prerequisites: Economics 1 or 51 and Economics 2 or 52. See C-L: Economics 199. One course. *Moulin*

176A. Perspectives on Food and Hunger (B). (SS) Analysis of hunger problems in United States and Third World countries. Focus on role of governments, nongovernmental organizations, and international agencies. Weekly lectures, discussion meetings, and individual research. C-L: Comparative Area Studies. One course. *Johns*

176B. Perspectives on Food and Hunger (B). (SS) Analysis of hunger problems in United States and Third World countries. Focus on role of governments, nongovernmental organizations, and international agencies. Weekly lectures, discussion meetings, and community internship project. C-L: Comparative Area Studies. One course. *Johns*

177. American Constitutional Development I (A). (SS) Development of the United States Constitution through Supreme Court decisions: the foundations of national power, including the separation of powers, the nature of the federal union and the relationship of the Constitution to political and economic life since 1790. May not be taken by students who have taken Political Science 118. C-L: History 177A. One course. *Fish*

178. American Constitutional Development II (A). (SS) Development of the United States Constitution through modern Supreme Court decisions: the scope of authority, liberty,

and equality through interpretations of the Bill of Rights and the Fourteenth Amendment. May not be taken by students who have taken Political Science 143. One course. *Fish*

179. Ecological Crisis and Political Theory (C-N). (SS) Interconnections between various dimensions of the ecological crisis including: conceptions of self, nature, ecological ethics, and environmental justice as related to politics, economics, and new social movements. One course. *Coles*

180. Media in Comparative Perspective (B). (SS) See C-L: Sociology 182; also C-L: Canadian Studies, Comparative Area Studies, and Film and Video. One course. *Smith*

181. Marxism and Neo-Marxism (C-N). (SS) Development of Marxism from Marx to the present. Critiques of capitalist political culture; the methodological underpinnings of various theorists, the conceptions of self and society which have animated these critiques. Works by Marx, Engels, Luxemburg, Lenin, Adorno, Horkheimer, Marcuse, Gramsci, Lukacs, Merleau-Ponty, Sartre, Habermas. One course. *Coles*

182. Classical Political Philosophy (C-N). (CZ) Ancient theories of the way of life and the political regime best suited to promote happiness in human communities. Readings from the Greek sophists, Aristophanes, Plato, Aristotle, the academic skeptics, Stoics, and Cicero. Prerequisite: junior standing; open to sophomores by consent of instructor. One course. *Staff*

184S. Canadian Issues (B). (SS) Prerequisite: Canadian Studies 98 or consent of instructor. See C-L: Canadian Studies 184S; also C-L: Comparative Area Studies, Cultural Anthropology 184S, Economics 184S, History 184S, and Sociology 184S. One course. *Staff*

185S. The Canadian Health Care System (B). (SS) See C-L: Canadian Studies 185S; also C-L: Comparative Area Studies, Cultural Anthropology 185S, Economics 185S, History 108E, Public Policy Studies 187S, and Sociology 185S. One course. *Warren or staff*

188. The Psychology of Political Symbols (A). (SS) The role of symbolic political issues in determining public attitudes and voting behavior. Symbolic political issues such as "law and order," pornography, and prohibition; distinguished from public welfare issues such as employment policies. C-L: Public Policy Studies 188. One course. *McConahay*

189, 190. Internship (A). Open to students engaging in practical or governmental work experience during the summer or a regular semester. A faculty member in the department will supervise a program of study related to the work experience, including a substantive paper on a politics-related topic, containing significant analysis and interpretation. Consent of director of undergraduate studies required. One course each. *Staff*

191, 192. Independent Study (A, B, C, D). Directed reading and/or research resulting in a substantive paper or report containing significant analysis and interpretation on a politics-related topic, under the supervision of a faculty member. Open only to qualified juniors by consent of the director of undergraduate studies and of the supervising instructor. One course each. *Staff*

193, 194. Independent Study (A, B, C, D). Directed reading and/or research resulting in a substantive paper or report containing significant analysis and interpretation on a politics-related topic, under the supervision of a faculty member. Open only to seniors by consent of the director of undergraduate studies and of the supervising instructor. One course each. *Staff*

196. American University Washington Semester (A, D). This number represents transfer credit for American Government and Politics or International Relations topics courses taken at American University in the fall or spring Washington Semester Program: Seminar I (one course), Seminar II (one course), Research Project (one course), Internship (one course).

Prior approval for admission into this program must be obtained from the director of undergraduate studies in political science. Four transfer credits.

A. Programs in American Government and Politics

D. Programs in International Relations

Four courses.

197S. Dealing with the Past in Democratic Transitions (B). (SS) How do newly democratic societies confront their authoritarian pasts, often marked by civil strife, in many cases ethnically, racially, and class based? Comparison of postwar Western European countries and Japan with recent transitions in Africa, Eastern Europe, and Latin America. One course. *Johns*

198. Documentary Film History (B). (AL, CZ) See C-L: History 150A; also C-L: Film and Video and Literature 117. One course. *Gaines, Paletz, and Wood*

199. Special Topics in Government and Politics. (SS) Topics vary from semester to semester.

A. American Government and Politics

B. Comparative Government and Politics

C. Political Theory

D. International Relations

One course. *Staff*

FOR SENIORS ONLY

200H. Senior Honors Program (A, B, C, D). (SS) Two-course, year-long sequence.

Fall: Senior Thesis Design, Research, Writing; One course.

Spring: Thesis Writing and Defense; One course.

Consent of instructor required. Variable credit. *Staff*

200S. Senior Seminars. (SS) Special topics courses; open also, if places are available, to qualified juniors who have earned a 3.0 average and obtain the consent of the instructor.

A. American Government and Politics

B. Comparative Government and Politics

C. Political Theory

D. International Relations

One course. *Staff*

FOR SENIORS AND GRADUATES*

201S. Problems in International Security (D). (SS) Major security issues. Prerequisite: a course in international relations or American foreign policy. One course. *Staff*

202. American Foreign Economic Policy (D). (SS) Formulation and implementation of American foreign economic policy in the twentieth century. Topics include theories of foreign economic policy-making, commercial and monetary policy, energy and agricultural policies, trade and security, aid to developing countries, management of the debt crisis, foreign investment, the industrial policy debate, and multinational corporations and banks. One course. *Staff*

203S. Issues in Politics and the Media in the United States (A). (SS) Research seminar analyzing significant questions in the relationship between politics and the media of communication. Consent of instructor required. C-L: Film and Video. One course. *Paletz*

*The following courses may be taken by juniors who have earned a 3.0 average and obtained the consent of the instructor.

205S. The Political Economy of Environmental Resources (B). (SS) The rational choice tradition (public goods, collective action, game theory, property rights, new institutionalism) as applied to environmental problems, resource exploitation, environmental justice, and the design of an environmentally sound society. One course. *McKean*

206S. Political Participation: Comparative Perspectives. (SS) The study of political participation through development of an understanding of relevant research methods. The effects of political culture on political participation. Popular participation and mobilization systems in liberal democracies and developing countries. One course. *Shi*

207S. American Constitutional Interpretation (A). (SS) U.S. Supreme Court interpretation of selected provisions of the Constitution. Prerequisites: Political Science 127 or 177 or 178 and consent of instructor. One course. *Fish*

209. Problems in State Government and Politics (A). (SS) One course. *Staff*

210S. Politics and Markets in Modern Capitalism (D). (SS) Exploration, through classic works and contemporary analyses, of the relationship between representative democracy and markets in modern capitalist society, with special attention to the impact of the world political economy on democracy and capitalism. One course. *R. Keohane*

212S. Politics and Markets (D). (SS) Seminar on classics of political economy, exploring the relationship between economic markets and politics as treated in the works of Adam Smith, Marx, Polanyi, Schumpeter, Lindblom, and Hirsch, as well as contemporary works on globalization and its effects on domestic politics. Open only to seniors and graduate students. One course. *R. Keohane*

213S. Theories of International Political Economy (D). (SS) Comparison and assessment of traditional and modern theories in terms of their logical and empirical validity. One course. *Grieco*

216S. Evolution of European Marxism (C-N). (SS) The central themes in the evolution of European Marxism: socialist thought prior to Marx; the writings of Marx and Engels. The themes are articulated in: Russian Marxism; Soviet Communism and its Marxist critics; the rethinking of Marx's political economy, the theory of the state, and concepts of class consciousness in the works of twentieth-century European Marxists. C-L: Comparative Area Studies. One course. *Coles*

217. Comparative and Historical Methods (B). (SS) See C-L: Sociology 214; also C-L: Comparative Area Studies. One course. *Gereffi, Lin, Smith, or Tiryakian*

218. Political Thought in the United States (C-N). (SS) American political thought through the Civil War period. The Founders and their European antecedents. Debates over the Constitution, slavery, and the Union. One course. *Gillespie or Grant*

220S. Problems in International Politics (D). (SS) Prerequisite: one course in international relations, foreign policy, or diplomatic history. One course. *Holsti*

222. Introduction to Statistical Analysis (C-E). (QR) Basic applications of statistical theory to political questions: research design, hypothesis tests, computer data analysis. Consent of instructor required for undergraduates. One course. *Brehm or Gronke*

223. Ancient Political Philosophy (C-N). (SS) Intensive analysis of the political philosophy of Plato, Aristotle, and other ancient theorists. C-L: Classical Studies 203. One course. *Gillespie or Grant*

224S. Modern Political Theory (C-N). (SS) A historical survey and philosophical analysis of political theory from the beginning of the seventeenth to the middle of the

nineteenth century. The rise of liberalism, the Age of Enlightenment, the romantic and conservative reaction, idealism, and utilitarianism. One course. *Grant or Spragens*

225. Topics in Comparative Government and Politics: Western Europe (B). (SS) Topics vary: the development of mass democracy and the welfare state; political and electoral participation and mobilization; social movements and political change; center-periphery conflicts; government and bureaucratic institutions and their relationships to society; the modern welfare state and political economy. C-L: Comparative Area Studies. One course. *Kitschelt or Lange*

227S. Issues in International Communications (B). (SS) Research seminar analyzing selected political issues in international communications. C-L: Film and Video. One course. *Paletz*

228S. Nineteenth- and Twentieth-Century Political Philosophy (C-N). (SS) Topics in nineteenth- and twentieth-century political philosophy, considering such authors as Hegel, Marx, Nietzsche, Kant, Fichte, Dostoevsky, and Heidegger. One course. *Coles or Gillespie*

229S. Contemporary Theory of Liberal Democracy (C-N). (SS) One course. *Spragens*

230S. Introduction to Positive Political Theory (C-E). (SS) Basic concepts of political economy, theory of preference and choice, social choice theory, and decision and game theory. One course. *Aldrich or Niou*

231S. Crisis, Choice, and Change in Advanced Democratic States (B). (SS) Contributions of Marx, Weber, and Durkheim toward analysis of modern democracies. Examination of selected contemporary studies using these three perspectives to highlight processes of change and crisis. Unsettling effects of markets upon political systems, consequences of bureaucratic regulation, and transformation of sources of solidarity and integration in modern politics. C-L: Comparative Area Studies. One course. *Kitschelt*

232. Political Economy: Theory and Applications (C-E). (SS) Selected topics. C-L: Comparative Area Studies. One course. *Lange*

234S. Political Economy of Development: Theories of Change in the Third World (B). (SS) Alternative approaches to political economy and social change in the Third World. C-L: Comparative Area Studies, Cultural Anthropology 234S, History 234S, and Sociology 234S. One course. *Staff*

236S. Hegel's Political Philosophy (C-N). (SS) Within context of Hegel's total philosophy, an examination of his understanding of phenomenology and the phenomenological basis of political institutions and his understanding of Greek and Christian political life. Selections from *Phenomenology*, *Philosophy of History*, and *Philosophy of Right*. One course. *Gillespie*

238S. Development of United States Courts of the Fourth Circuit (A). (SS) Examines judges, courts, and law of United States district and old circuit courts and Court of Appeals: Maryland, Virginia, West Virginia, North Carolina, South Carolina, 1789-1958. Consent of instructor required. C-L: History 255A and Law 548S. One course. *Fish*

239. Comparative History and International Relations (D). (SS) Forces central to the practice of politics and international relations. Theoretical perspectives include those of Oswald Spengler, Schumpeter, Marx, Weber, and Aron as well as historical cases such as the Russian Revolution, the world wars, the Depression, and the nuclear era. One course. *Staff*

240. American Political Behavior (A). (SS) One course. *Staff*

244S. The Politics of the European Community (D). (SS) Historical, theoretical, and analytical treatment of reform and renewal of the European Community: trade, finance,

economic and technological relationships. Impact of European Community development on international relations and American foreign policy. One course. *Grieco*

247. Politics and Philosophy of Self and Other (C-N). (SS) Epistemological, ontological, ethical, and political dimensions of relations between self and other. Theorists may include Husserl, Merleau-Ponty, Levinas, Derrida, Adorno, Gadamer, Sartre, Foucault, and Bahktin. One course. *Coles*

250S. International Security after the Cold War (D). (SS) Contemporary issues in international security: nuclear proliferation, balance of power, the role of force, alternative viewpoints. Consent of instructor required. One course. *Feaver*

253S. Comparative Government and the Study of Latin America (B). (SS) Current literature on major themes of Latin American politics. C-L: Comparative Area Studies. One course. *Archer*

254S. Essential Global Democracy (A). (SS) The failure and success in establishing real democracy, including focus on the main leaders. Issues of law, rights, equality, representation, reasoning, and other principles addressed in the context of practical politics. One course. *Staff*

256S. Theory and Practice of National Security (D). (SS) In-depth look at the theoretical and empirical literature explaining how states seek to guarantee their national security. Topics include: grand strategy, nuclear deterrence and warfighting, coercive diplomacy, military intervention, decisions for war, and civil-military relations. Special attention paid to U.S. national security during and after the Cold War. One course. *Feaver*

257S. Making American Defense Policy (D). (SS) Theory and practice of politics of national security in the United States. One course. *Feaver*

262S. Transitions from Classic Communism (B). (SS) The different patterns of reform among former and existing communist countries. C-L: Comparative Area Studies. One course. *Hough*

265S. The Process of International Negotiation (D). (SS) See C-L: Public Policy Studies 265S; also C-L: Canadian Studies. One course. *Mayer*

266. Comparative Social Policy (B). (SS) See C-L: Public Policy Studies 266; also C-L: Comparative Area Studies. One course. *Staff*

267S. Policy-Making in International Organizations (D). (SS) See C-L: Public Policy Studies 267S. One course. *Ascher*

268S. The Regulatory Process (A). (SS) See C-L: Public Policy Studies 269S. One course. *Hamilton*

271. International Environmental Regimes (B). (SS) Law, politics, and institutional design of international regimes created among nations to cope with environmental problems. Includes study of particular conventions and treaties (for example, acid rain, ozone, carbon reduction, biodiversity, Antarctica, regional seas, ocean dumping), and the environmental implications of international trade rules and regimes (for example, GATT). C-L: Comparative Area Studies and Public Policy Studies 258. One course. *McKean*

272. China and the World (D). (SS) The formulation and development of Chinese foreign relations and foreign policy since 1949. One course. *Shi*

273S. Heidegger (C-N). (CZ, SS) An examination of the philosophy of Martin Heidegger from its phenomenological beginnings to its postmodernist conclusions with particular attention to its meaning for questions of identity, history, nihilism, technology, and politics. C-L: Philosophy 273S. One course. *Gillespie*

274S. Seminar in Urban Politics and Urban Public Policy (A). (SS) A probing of topical issues in both their theoretical antecedents and their contemporary manifestations. The intellectual debates and scholarly treatments surrounding issues of power in the city, urban redevelopment policy, urban poverty, and race in the city. C-L: Public Policy Studies 275S. One course. *Orr*

275. The American Party System (A). (SS) An intensive examination of selected facets of American national political parties, such as relationships between presidential and congressional politics, the politics of national conventions, recent foreign policy and party alignments, and the controversy over party government. One course. *Staff*

276S. Media and Democratization in Russia (B). (SS) See C-L: Public Policy Studies 243S. One course. *Mickiewicz*

277. Comparative Party Politics (B). (SS) The impact of social and political systems on party structures, functions, ideologies, and leadership recruitment. Emphasis upon research techniques and objectives. C-L: Canadian Studies and Comparative Area Studies. One course. *Lange*

278S. Black Political Participation (A). (SS) Topical issues concerning the political participation of African Americans, primarily on the national level. Black voter turnout, the electoral choice, the role of African Americans in the Democratic and Republican parties, black interest group politics, black political opinion, and black political socialization. C-L: African and African-American Studies 278S. One course. *Orr*

281. American Political Thought Since the Gilded Age (C-N). (SS) The development of American political thought since the late nineteenth century. Special emphasis on the Progressive era and on modern-day attempts to reconstruct theories of liberalism and democracy. One course. *Price*

282S. Canada (B). (SS) See C-L: Canadian Studies 282S; also C-L: Comparative Area Studies, Cultural Anthropology 282S, Economics 282S, History 282S, and Sociology 282S. One course. *Thompson or staff*

283S. Congressional Policy-Making (A). (SS) Lawmaking and oversight of the executive branch by the U.S. Congress. Committee, party, executive, and interest group roles. C-L: Public Policy Studies 283S. One course. *Gronke*

284S. Public Policy Process in Developing Countries (B). (SS) See C-L: Public Policy Studies 284S; also C-L: Comparative Area Studies. One course. *Ascher*

285S. Seminar in North American Studies. (CZ) See C-L: North American Studies 283S; also C-L: Cultural Anthropology 283S, History 283S, Public Policy Studies 282S, Romance Studies 283S, and Sociology 283S. One course. *Staff*

286. Theory and Practice of International Security (D). (SS) Analyses and criticism of the current theoretical, empirical, statistical, and case study literature on international security. No prerequisite, but Political Science 93 recommended. One course. *Goemans*

287. Revolution, Reform, and Democratization (B). (SS) A comparison of revolution and democratization in the United States, Western Europe, and Russia with that in the contemporary Third World. One course. *Hough*

288. War and the National State (D). (SS) Transformation of warfare by selected socio-economic and technological revolutions and its impact on international relations, 1800-1945. No prerequisite, but Political Science 93 recommended. C-L: History 255B. One course. *Goemans*

289S. Contemporary Ethical Theories (C-N). (CZ, SS) Consent of instructor required. See C-L: Philosophy 203S. One course. *Flanagan, Golding, or MacIntyre*

291. Research Methods in Japanese. (SS) Consent of instructor required. See C-L: Japanese 291; also C-L: Cultural Anthropology 290, History 292, and Sociology 291. One course. *Staff*

299. Advanced Topics in Government and Politics. (SS) Topics vary from semester to semester.

- A. American Government and Politics
 - B. Comparative Government and Politics
 - C. Political Theory
 - D. International Relations
- One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

- 112S. Shaping the News (A). (SS)
- 114. Public Opinion (A). (SS)
- 121. International Organization (D). (SS)
- 124. National Economic Statecraft (D). (SS)
- 129. Political Participation (A). (SS)
- 135. Political Development of Western Europe (B). (SS)
- 144. Force and Statecraft (D). (SS)
- 149. United States and East Asia (D). (SS)
- 152. Political Mobilization of the American Public (A). (SS)
- 161S. Comparative Government and Politics: Africa (B). (SS)
- 174S. Political Biography (A). (SS)
- 186. Political Leadership (A). (SS)
- 187S. Politics and the Libido (A). (SS)
- 195. Comparative Political Behavior in the United States and Canada (B). (SS)
- 204S. Ethics in Political Life (C-N). (SS)
- 208S. Analyzing the News (A). (SS)
- 211S. Current Problems and Issues in Japanese Politics (B). (SS)
- 219S. Film and Politics (A). (SS)
- 221S. International Institutions and the World Political Economy (D). (SS)
- 233. Intermediate Statistical Methods (C-E). (QR)
- 235S. Comparative Development of Islam (B). (SS)
- 243S. Political Applications of Game Theory (C-E). (SS)
- 246S. Political Hypocrisy and Idealism (C-N). (SS)
- 249. The Politics of Health Care (A). (SS)
- 251S. The American Presidency (A). (SS)
- 252S. The Nation-State and the International System (D). (SS)
- 258. Global Interdependence. (SS)
- 260S. The Tradition of Political Inquiry (C-N). (SS)
- 269S. War and Wealth in the International System (D). (SS)
- 270S. Fundamentals of Political Economy (C-E). (SS)
- 279S. Political Protest and Collective Mobilization (B). (SS)
- 293. Federalism (B). (SS)

POLITICAL INTERNSHIPS

The department administers an internship program, primarily in Washington, D.C., for political science majors and interested nonmajors. Students participate by qualifying for a position obtained by the department or by acquiring their own relevant employment, with or without compensation. Course credit can be obtained by enrolling in Political Science 189

or 190 and writing a substantive paper containing significant analysis and interpretation on a politics-related topic. Potential applicants should contact the internship director, Karen Feaver (404 Perkins), at any time, but preferably in the fall semester.

POLITICAL SCIENCE COURSES BY FIELDS

Political science courses for undergraduates are offered in four fields. The courses in each of the four fields are listed below; in the course descriptions above, the field in which each course falls is indicated by the appropriate symbol (A, B, C-N/C-E, or D). Students majoring in the department must complete at least one course in each of three fields.

American Government and Politics (A). Political Science 49S*, 60S*, 91, 91D, 110K, 101A,S, 103A, 103B, 108, 109, 110, 112S, 127, 128, 129, 130S, 137, 141, 145, 146D, 152, 154, 164, 174S, 177, 178, 186, 187S, 188, 189, 190, 191,* 192,* 193,* 194,* 196A, 198, 199A, 200A,S, 200H*, 203S, 207S, 208S, 209, 219S, 238S, 240, 251S, 268, 274, 275, 283S, 299A.

Comparative Government and Politics (B). Political Science 49S,* 60S,* 92, 92D, 98, 100A, 100C, 100E, 100K, 100L, 100M, 100Q, 102, 105, 107, 111, 115, 117, 119, 125, 132, 134, 135, 136, 151, 153, 155, 161S, 162, 165, 169, 171, 173S, 176A, 176B, 180, 184S, 191,* 192,* 193,* 194,* 195, 197, 199B, 200B,S, 200H,* 205S, 211S, 217, 225, 227S, 231S, 234S, 235S, 249, 253S, 258, 262S, 266S, 276S, 277, 279S, 282S, 284S, 287, 291, 293, 299B.

Political Theory: Normative (C-N). Political Science 49S,* 60S,* 94, 94D, 101C,S, 104, 123, 126, 131, 140, 150, 159, 175A, 179, 181, 182, 191,* 192,* 193,* 194,* 199C-N, 200C-N,S, 200H,* 204S, 216S, 218, 223, 224S, 228S, 229S, 245, 246S, 247, 260S, 264S, 299C-N. Empirical and Methodology (C-E). Political Science 138, 139, 168, 191*, 192*, 193*, 194*, 199C-E, 200C-E,S, 200H*, 222, 230S, 232, 233S, 243S, 270S, 289S, 299C-E.

International Relations, Law, and Politics (D). Political Science 49S,* 60S,* 93, 93D, 100C, 106, 113A, 113B, 120, 121, 122, 124, 133, 134, 142, 144, 147, 148D, 149, 156, 157, 158, 160, 167, 170, 191,* 192,* 193,* 194,* 199D, 200D,S, 200H,* 200D,S, 201S, 202, 206, 210S, 213S, 220S, 221S, 239, 244S, 250, 252, 256S, 257S, 265S, 267S, 272, 299D.

THE MAJOR

Major Requirements. Ten courses in political science, at least eight of which must be at or above the 100 level. Among the ten courses taken must be at least one course in each of three fields and at least one course taken at Duke at the 200-299 level. The department also requires that each major select one area of concentration.

An area of concentration is defined as five courses, at least one of which must be at the 200 level. The twelve areas of concentration and the courses that qualify for each area are listed below. It should be noted that many courses are listed under more than a single area of concentration. All majors are required to select a concentration in consultation with their advisor; majors are strongly encouraged to make their selection by the end of the first semester of their junior year.

All courses currently being offered by the department are listed under one or more areas of concentration, but this list does not include courses that may be offered by visiting faculty, courses taken abroad, courses transferred from other universities, or courses that may have content that varies from year to year. More specifically, the following types of courses are not included in these lists:

- PS 49S First-year seminars
- PS 60S Introductory Seminars in Political Science
- PS 100 Duke study abroad programs
- PS 189, 190 Internship credit.
- PS 191-194 Independent Study
- PS 196 Washington Semester Program
- PS 200A-D Senior Seminars

*If subject matter is appropriate to the field.

Students taking such a course should consult with their advisors to determine in which sequence it will be assigned. The same procedure will apply to courses taught on a one-time basis by visiting faculty.

Areas of Concentration

American Institutions and Public Policy

Introductory — 91, 101A

100-Level— 103, 108, 109, 110, 127, 128, 130S, 131, 141, 145, 146, 154, 157D, 164, 187S, 189*, 190*, 191*, 192*, 193*, 194*, 199A*

200-Level— 200A,* 200H, 203S, 207S, 208S, 209, 218, 230, 251, 257, 268, 274S, 275, 283S, 293, 299A*

Public Opinion, Campaigns, and Elections

Introductory —91

100-Level— 110, 114, 129, 131, 137, 152, 154, 188, 189*, 190*, 191*, 192*, 194*, 199A

200-Level— 200A,* 200H,* 203S, 208S, 219S, 240, 275

Philosophical and Legal Foundations of American Politics

Introductory—91

100-Level—126, 127, 131, 146D, 177, 178, 191*, 192*, 193*, 194*, 199C-N*, 199A*

200-Level—200A,*200H,* 207S, 218, 229S, 238S, 254, 299A, 299C-N*

Comparative Democracies†

Introductory —91, 92, 98

100-Level—102, 110, 111, 114, 115, 117, 119, 126, 135, 136, 137, 139, 151, 153, 164, 171, 174S, 180, 184S, 186, 191*, 192*, 193*, 194*, 195, 197, 199B*

200-Level—200A,* 200B,* 200H,* 211S, 219S, 225, 231, 240, 253, 254, 275, 276S, 277, 279S, 282S, 287, 291, 293, 299B*

Comparative and International Political Economy

Introductory—92, 93

100-Level—107, 113, 122, 125, 136, 139, 147, 155, 164, 170, 172, 173S, 176A, 176B, 191*, 192*, 193*, 194*, 199B*

200-Level —200B,* 200D,* 200H,* 205S, 213S, 218, 221S, 232, 243S, 244S, 270S, 299B*

Politics of Socialist and Capitalist Development

Introductory—92

100-Level—101B, 105, 117, 132, 149, 151, 155, 161S, 165, 171, 173S, 176A, 176B, 191*, 192*, 193*, 194*, 199B*

200-Level—200B, 200H,* 234S, 253S, 262S, 267S, 284S, 287, 299B*

International Security

Introductory —93

100-Level—106, 120, 122, 142, 144, 157D, 167D, 191*, 192*, 193*, 194*, 199D*

200-Level—200D*, 200H,* 201S, 250S, 256S, 257S

Problems and Issues in Contemporary International Relations

Introductory—93

100-Level—113, 120, 121, 122, 147, 160, 167D

200-Level—200D,* 200H,* 201S, 205S, 220S, 227S, 252S, 299D*

Comparative Foreign Policy Analysis

Introductory—93

100-Level—124, 133, 149, 157D, 191*, 192*, 193*, 194*, 199D*

200-Level—200D,* 200H,* 202, 272, 299D*

*If subject matter is appropriate to the field.

†Students selecting this sequence must select at least two courses that deal with non-North American political systems.

International Political Economy

(see Comparative and International Political Economy)

Political Theory

Introductory—94, 123

100-Level—101C, 104, 123, 126, 131, 140, 150, 159, 179, 181, 182, 191*, 192*, 193*, 194*, 199C-N*

200-Level—200C,* 200H,* 204S, 216S, 218, 223, 224S, 228S, 229S, 236S, 246S, 247, 254, 260S, 289S, 299C-N*

Research Methods

Introductory—139

100-Level—125, 145, 164, 168, 175A, 191*, 192*, 193*, 194*, 199C-E*

200-Level—200H, 205S, 230S, 232, 243S, 270, 299C-E*

Of the ten required political science courses, at least eight must be taken at Duke to meet major requirements. However, only seven political science courses need be taken at Duke if the student: (1) is transferring courses from a year-long approved study abroad program; or (2) transferred to Duke after completing two undergraduate years at another institution; or (3) completed one semester at an approved study abroad program and one semester in the Washington Semester Program at American University. For the purpose of this requirement courses in the Washington Semester Program at American University (Political Science 196, A, D) will be counted as transfer courses.

Advanced Placement Credit. Advanced placement credits in political science (score of 4 or 5). These course credits are designated as Political Science 90A (American Government and Politics) and Political Science 90B (Comparative Government and Politics). Such credits are applied toward the thirty-four credits needed for graduation and enable students to enroll in any 90-level introductory course(s) and permit them to enroll in advanced American and/or Comparative Government course(s). Advanced placement course credits (90A, 90B) do not satisfy course requirements for the political science major.

Suggested Work in Related Disciplines. Selected courses in such disciplines as anthropology, economics, history, philosophy, psychology, public policy, religion, and sociology are desirable.

Honors/Distinction

The department offers students majoring in political science a senior honors program, by successful completion of which a participant achieves graduation with distinction in political science. The central requirement of the program is an honors thesis which the student prepares under faculty supervision. The honors program consists of two courses (Political Science 200H.02 and 200H.03). Seniors entering their seventh semester who have attained at least a 3.3 grade point average overall and a 3.3 average in political science courses are eligible for admission to Political Science 200H.02. Upon request, the instructor may recommend admission to the honors seminar of a student who lacks one or both requisite grade point averages. The program director must approve any recommended student's admission.

Political Science 200H.02, a seminar usually taken in the fall of the senior year, is devoted to development of the honors thesis and includes close supervision of the writing stage of the project by a faculty supervisor selected by the student. Continued close faculty supervision of the project occurs in Political Science 200H.03, which is an independent study course.

Completion of the thesis, its evaluation, and its defense before a three-member faculty committee warrants graduation with distinction in political science if a grade of A- or better

*If subject matter is appropriate to the field.

is assigned to the student's thesis and performance in Political Science 200H.02 and 200H.03. The intradepartmental concentration option is partially satisfied by successful completion of the two-course senior honors thesis seminar. Further information may be obtained from the honors program director or from the director of undergraduate studies.

THE MINOR

Requirements. A minimum of five courses in political science, no more than two of which may be numbered less than 100.

Primatology

Professor Glander, *Director*

A certificate, but not a major, is available in this program.

Interest in human evolution has surged in recent years because of some startling fossil discoveries and the rapid development of a strong theoretical base for the study of primate behavior and ecology. The anatomy of living and fossil primates can be interpreted only on the basis of the behavior and ecology of living primates. The Department of Biological Anthropology and Anatomy and the Duke University Primate Center contain collections of specimens of both extant and fossil nonhuman primates. The Primate Center provides a further and unique opportunity to study fossil specimens and living primates simultaneously.

The goal of the program is to understand the behavior and biology of primates, including humans. Program objectives include an understanding of the origin and evolution of humans as well as their morphological and behavioral relationships to other primates. The study of primate evolution involves such diverse areas of investigation as morphology, social behavior, ecology, and physiology. A cross-disciplinary approach employing the faculty of the Duke Primate Center and the Departments of Biological Anthropology and Anatomy, Philosophy, Psychology, Zoology, and the Nicholas School of the Environment provides the opportunity for linking of these parts of the University in order to concentrate on a topic which has become too large for one perspective or one discipline.

The curriculum includes six courses, all of which must be completed to receive the program certificate:

Three required courses: Biological Anthropology and Anatomy 93D (Introduction to Physical Anthropology), Biological Anthropology and Anatomy 186S (Research Internship), and Biological Anthropology and Anatomy 187S (Senior Seminar);

Three elective courses chosen from the recommended list published annually in the program brochure.

The Research Internship and Senior Seminar arranged through the program are available only to students seeking the program certificate. Other components of the program are available to all undergraduates.

Psychology (PSY)

Professor R. Erickson and Associate Professor Putallaz, *Co-Directors of Undergraduate Studies*; Professors Bettman, Blumenthal, Brodie, Carson, Coie, Costanzo (*Chair: Social and Health Sciences*), Eckerman, C. Erickson, George, W. G. Hall, Hamilton, Hasher, Holland, Keefe, Lockhead (*Chair: Experimental*), McLoyd, Payne, Purves, Roth, Rubin, Sheppard, Spenner, Staddon, Surwit, Thompson, Vidmar, M. Wallach, and R. Williams; Associate Professors Anderson, Curry, Day, Kuhn, Linville, Lochman, Logue, Marsh, Meck, Nowicki, Quinn, Robins, Schmajuk, Siegler, Wells, and C. Williams; Assistant Professors Curran, Fischer, Gustafson, Hill, March, Mazuka, Needham, Serra; Professors Emeriti Alexander, Borstel-

mann, Kimble, Kremen, Lakin, H. Schiffman, and Wing; Research Professors Crovitz, Goldstein, W. C. Hall, S. Schiffman, and L. Wallach; Associate Research Professor Madden; Assistant Research Professors Higa and Welsh; Associate Adjunct Professor Swartzwelder; Assistant Adjunct Professor Stocking; Visiting Professor Fail; Research Scholar Fairbank

A major or minor is available in this department.

The *General Courses*, coded (G), do not count towards an area of concentration, but do count towards the major. The *Biological Bases of Behavior* area, coded (B), includes courses on the nervous system, the learning process, motivation, neurochemistry, hormones, and other biological factors in their relationship to behavior. The *Cognitive Psychology* area, coded (C), includes the topics of sensation and perception, cognition, learning, language, memory, and psycholinguistics. *Developmental Psychology*, coded (D), emphasizes the developmental aspects of all psychological processes such as sensory and motor behavior, cognition, children's thinking and reasoning, and social behavior. Courses in the *Personality/Social Psychology* area, coded (P), ultimately bear on the questions of human character and behavior, both normal and abnormal. These include personality, social and abnormal issues, along with strategies for the prevention of deviance. Dr. Pullataz has primary responsibility for the developmental and personality/social areas of the major, and Dr. R. Erickson has primary responsibility for the biological and cognitive areas.

11. Introductory Psychology (G). (SS) Biological bases of behavior, psychological development, cognitive psychology, personality, abnormal behavior, and social psychology. Designed as a broad introduction to psychology for nonmajors as well as majors; not required for the major. Students are expected to participate as subjects in three to six hours of psychological research. One course. *Holland or H. Schiffman*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

91. Biological Bases of Behavior: Introduction and Survey (B). (NS) Physiological, developmental, and evolutionary approaches to behavior. Sensory and cognitive processes, sleep, pain, emotion, hunger, and thirst as well as maternal and sexual behavior patterns. Students required to participate as subjects in three to six hours of psychological research if not done in a previous introductory class. Not open to students who have taken Psychology 103. Prerequisite: Biology 19 or Biology 25L; may be taken concurrently. One course. *C. Erickson, C. Williams, or staff*

92. Cognitive Psychology: Introduction and Survey (C). (SS) Overview of cognitive processes including pattern recognition, concept formation, attention, memory, imagery, language, problem solving, and thinking. Emphasis both empirical and theoretical. Students required to participate as subjects in three to six hours of psychological research if not done in a previous introductory class. Not open to students who have taken Psychology 107. One course. *Day, Hasher, Rubin, or Serra*

97. Developmental Psychology: Introduction and Survey (D). (SS) Theory and research on growth and behavior from infancy to adolescence. Students required to participate as subjects in three to six hours of psychological research. Not open to students who have taken Psychology 105. One course. *Goldstein, Hill, Mazuka, Needham, Putaliez, or staff*

99. Personality and Social Behavior: Introduction and Survey (P). (SS) The determinants of socially significant human behavior—those residing in the person, those that are the product of interpersonal context, and those resulting from the interaction of both sources. Formative as well as contemporary influences considered. Students participate in three to six hours of psychological research if not done in a previous introductory class. Not open to students who have taken Psychology 108. One course. *Costanzo, Fischer, or staff*

100S. Behavior, Evolution, and Society (B). (NS) An interdisciplinary exploration of behavioral psychology, Darwinian evolution, and the nature of society. Special topics include

the history and tenets of behaviorism, experimental techniques in behavioral psychology, the IQ controversy, evolutionary epistemology, and pragmatic philosophy. Open only to students in the FOCUS Program. One course. *Staddon*

101. Research Methods in Psychological Science (G). (NS, SS) A systematic approach to the problem of designing and conducting psychological research putting that research into a larger scientific context featuring both experimental and nonexperimental methods, including observational, archival, and case-study methods. Problems of validity and control. Analysis of theorizing coupled with examination of psychological constructs used in behavioral neuroscience, cognitive science, developmental psychology, sensation and perception, as well as psychological aspects of the social and health sciences. Prerequisite: one prior course in psychology. One course. *Meck*

102. Mind, Brain, and Computers (B, C). (NS) How computers contribute to the integrative study of the mind and brain. Topics include real and artificial neurons and neural networks, finite automata, feedback systems, pattern recognition by neural networks and the brain, motor programs, connectionism, supervised and unsupervised learning, synaptic matrices, Turing machines, self-reproducing automata, and genetic algorithms. Recommended for psychology, biology, philosophy, computer science, and engineering majors. Minimal computer literacy advised. One course. *Schmajuk*

106. The Psychology of Women (P). (SS) The psychology of women in this country: development, including sex differences, separation and individuation, and achievement; sexuality; sex-roles; mental health problems particularly salient to women; cultural influences on female development; and views within the field of psychology about women. C-L: Women's Studies. One course. *Fischer, Hamilton, or Roth*

109A. Health Psychology (P). (SS) The role of behavior in the etiology, pathophysiology, and treatment of cardiovascular disease and endocrine disorders; psychoneuroimmunology; chronic pain; and life style behaviors with health consequences such as smoking and eating disorders. Not open to students who have taken Psychology 98. One course. *Anderson or Keefe*

109B. Stress and Coping (P). (SS) Psychological theory and empirical work on stress and coping, with an emphasis on post-traumatic stress. Not open to students who have taken Psychology 163S. Prerequisite: Psychology 99. One course. *Keefe*

109C. Behavioral Medicine (P). (SS) Overview of the interdisciplinary field of behavioral medicine, emphasizing the integration of the social and behavioral sciences in the service of understanding physical health and illness. Psychosocial risk factors for medical illness; biobehavioral mechanisms whereby psychosocial risk factors affect pathophysiology; and biobehavioral intervention to treat and rehabilitate patients with major medical disorders in interdisciplinary settings. Psychology 109A encouraged as a prerequisite, but not required. One course. *R. B. Williams*

111. Learning and Adaptive Behavior (B, C). (NS) Principles of instrumental learning in animals and humans. Prerequisite: none, but some knowledge of quantitative science desirable. One course. *Higa*

112. Cognitive Neuroscience (C). (SS) Relating empirical findings in perception and cognition to structures and processes in the brains of animals and people. Emphasis on vision. Prerequisite: prior course in psychology. One course. *Lockhead*

113A. Self and Society (P). (SS) See C-L: Cultural Anthropology 141. One course. *Apte, Ewing, or Luttrell*

113B. Psychological Anthropology (C, D, P). (SS) See C-L: Cultural Anthropology 165. One course. *Ewing or Strauss*

114. Personality (P). (SS) Representative theories of personality from Freud to the present, emphasizing problems of normal personality structure, dynamics, development, and assessment. One course. *Curry*

115. Introduction to Learning Theory (C). (SS) Simple processes of learning, memory, and motivation, primarily nonhuman, from the perspectives of associationism, ethology, and cognitive science. One course. *Holland*

116. Social Psychology (P). (SS) Problems, concepts, and methods in the study of social interaction and interpersonal influence. C-L: Sociology 106 and Women's Studies. One course. *Costanzo, Fischer, George, or staff*

117. Statistical Methods (G). (QR) See C-L: Sociology 133. One course. *Land or Spenner*

118. Special Topics in Social Psychology (P). (SS) Study of one broad area in social psychology; exact content area varies by semester. Possible areas include social cognition, social influence, and applied social psychology. Prerequisite: Psychology 99, 108, or 116. One course. *Costanzo or Fischer*

119A. Abnormal Psychology (P). (SS) Disordered behavior and constructive personality change viewed in interpersonal and social context for purposes of understanding normal and abnormal personality development and functioning. One course. *Carson or staff*

119B. Child Clinical Psychology (D, P). (SS) Theories of clinical intervention with children and families, evaluation of therapy and epidemiological data. Prerequisite: Psychology 97 or 99. One course. *Thompson and staff*

120. Comparative Psychology (B). (SS) A survey of animal behavior from the psychologist's perspective. One course. *Holland*

121. Early Cognitive Development (C, D). (SS) Perceptual and conceptual development in humans from birth through early childhood. Topics include how infants and young children perceive the world, how they acquire knowledge about the world, and how they remember and use this knowledge over time. Prerequisite: Psychology 97 or 105. One course. *Needham*

122. Psychology of Thinking (C). (SS) An overview of high level cognitive processes. Topics include categorization, problem solving, decision making and human factors. Prerequisite: one previous psychology course. One course. *Serra*

123. Introduction to Human Memory (C). (SS) A review of the theoretical and empirical study of the encoding, storage, and retrieval of information. The development, pathology, and computer modeling of memory in clarification of basic process and applications. One course. *Hasher, Rubin, or Serra*

124. Human Development (D). (SS) Especially for sophomores. Juniors and seniors by consent only. See C-L: Human Development 124; also C-L: Sociology 124. One course. *Anderson, Gustafson, or staff*

125. Memory and the Brain (B). (NS) Brain function in relation to the phenomenon of memory. Historical and current perspectives. One course. *Swartzwelder*

126. Behavior and Neurochemistry (B, P). (NS) The role of brain chemicals (neurotransmitters, peptides, and hormones) in behavior. Hypotheses addressing the neurobiology of mental disorders. Prerequisite: Psychology 91 or 103. One course. *Meck*

127. Drugs, Brain, and Behavior (B). (NS) Mechanisms by which psychoactive drugs act. Changes which occur with chronic use of drugs; drug abuse and dependence. Social and legal implications of psychoactive drugs. This course is designed for both science and

nonscience majors. Prerequisites: introductory biology (Biology 25L) and chemistry (Chemistry 11L, 12L). C-L: Pharmacology 160. One course. *Kuhn*

129. Psychology and the Law (P). (SS) The relationship between psychology and the legal system. Theory, empirical findings, and court cases in mental health law, including the insanity defense, competency to stand trial, and civil commitment. Use of social science data in several legal domains, including expert testimony in rape and domestic assault trials, employment discrimination, and trademark infringement. Prerequisite: Psychology 99 or 108 or Psychology 116. One course. *Fischer*

130. Psychosocial Aspects of Human Development (D). (SS) The connectedness of societal, behavioral, and biological components of normal development from childhood through old age; society as the context in which individuals develop over the life span. Introductory work in anthropology, psychology, or sociology recommended. C-L: Human Development 180 and Sociology 169. One course. *Staff*

131. Early Social Development (D). (SS) The developmental course of children's social behavior. The role that certain relationships (for example, mother, father, siblings, peers, friends) play in that development as well as the effects of other influences (for example, school, television, divorce, daycare). Prerequisite: Psychology 97 or 105. One course. *Putallaz*

132A. Cognitive Aspects of Human Development (C, D). (SS) The development of mind and its relation to other aspects of human development. Development of visual and auditory perception, language, memory, concepts, problem solving, academic skills, social cognition, and cognition and culture. Prerequisite: one course in psychology. One course. *Mazuka*

132B. Cross-Cultural Perspectives on Development: A View from Japan (C, D). (SS) Cross-cultural examination of issues in developmental psychology from an Asian perspective, especially from modern day Japan. Selected topics in developmental psychology evaluated from the perspectives of Japan and other cultures in Asia, and contrasted to American studies. C-L: Cultural Anthropology 166. One course. *Mazuka*

133. Fundamental Issues in the Study of the Brain (B). (NS) Classic papers in the fields of systems, developmental, cellular, and molecular neurobiology. C-L: Neurobiology 133. One course. *W. C. Hall*

134. Psychology of Language (C). (SS) Psychological "reality" of linguistic structures, language and cognition, biological bases, animal communication, language pathologies, nonverbal communication, language versus music, linguistic universals, and bilingualism. Everyday language phenomena (for example, slips of the tongue) as well as the experimental and theoretical literature. Psychology 92 or 107 desirable. C-L: Linguistics. One course. *Day*

135. Principles of Neurobiology (B). (NS) Prerequisites: Biology 25L, and Chemistry 12L or equivalent. See C-L: Biology 154; also C-L: Neurobiology 154. One course. *LaMantia or Nowicki*

136. Developmental Psychobiology (D). (SS) Early human social development, including the formation of social relationships, the origins of altruism and aggression, sex differences, peer relationships, and verbal and nonverbal communication patterns. Prerequisite: Psychology 91, 97, 103, or 105, or consent of instructor. One course. *Eckerman*

137. Adolescence (D). (SS) Adolescent development, including identity formation, intelligence, sexuality, peer and parent relationships, vocational choices, drugs, and psychopathology. Theory and empirical findings. One course. *Goldstein, Stocking, or staff*

138. Language Development (C, D). (SS) Survey of language development. First language acquisition (phonology, syntax, and semantics), issues in second language acqui-

sition and bilingualism, chimpanzee studies, and language pathology. Examined in a theoretical framework of Chomskian innate language faculty, as well as in a framework which emphasizes the role of pragmatics and communicative skills. Prerequisite: one course in developmental or cognitive psychology. C-L: Linguistics. One course. *Mazuka*

139. Psychobiology of Motivation (B, D). (NS) The psychobiology of such concepts as motivation, drive, incentive, reward, and goal-directed behavior. The neural mechanism; developmental perspectives. Prerequisite: Psychology 91 or 103. One course. *Staff*

150S. Hormones and Behavior (B, P). (NS) Behavioral neuroendocrinology of sexual differentiation, reproduction, emotion, feeding, learning, and memory in animals and humans. Prerequisite: Psychology 91 or 103. C-L: Women's Studies. One course. *C. Williams*

151S. Preventive Intervention with Children (D, P). (SS) Theories and strategies of prevention of human dysfunction. Prediction at risk in child and adolescent populations. Practicum assignments in community settings. Consent of instructor required. One course. *Miller-Johnson*

153S. Issues in Language Development (C, D). (SS) "Critical Period" in language development, the role of "motherese," infant speech perception, innovative word creation, telegraphic speech, bilingualism and second language learning, learning to read, language, cognition and culture, and language pathology. One course. *Mazuka*

154S. Education, Children, and Poverty (D). (SS) Psychological hypotheses concerning the roles of preschool intervention programs, improved quality of resources, teacher expectancy effects, and enhancement of pupil self-confidence in relation to the goal of improved cognitive competence for poverty background children. Criteria for defining competence, such as scores on psychometric intelligence tests, performing on Piagetian tasks, and development of specific skills. Interpretations concerning intelligence and cognitive deprivation in poor children in light of relevant psychological evidence. Prerequisite: one course in psychology or consent of instructor. One course. *M. Wallach*

157S. Life Span Analysis of Social Relationships (D, P). (SS) The developmental changes that occur in social relationships (for example, parent, sibling, peer) across the life span; the differing roles these relationships play in the development of the individual. Prerequisite: Psychology 97 or 105. One course. *Putallaz*

158S. Sleep: Its Nature and Function (B). (NS) Explores the phenomena of sleep over the full range of biological and psychological aspects. Function of sleep and consequences of sleep loss and change. Sleep disorders. Prerequisite: Psychology 91 or 103. One course. *Marsh*

159S. Biological Psychology of Human Development (B, D, P). (SS) Multidisciplinary perspectives bearing on key processes in human development from infancy through old age; the way that biological and psychological processes act together in normal and pathological behavior and development. Clinical case material and videotapes. Preference given to senior psychology majors and to students in the Program in Human Development. Consent of instructor required. C-L: Human Development. One course. *Thompson*

162S. Clinical Issues: Conceptions, Techniques, and Problems of Professional Clinical Psychology (P). (SS) Assessment of personality and psychopathology. Consultation and psychotherapy in individuals, groups, family, and organizational contexts. Research on clinical questions. Intended for those contemplating advanced graduate or professional study and careers in clinical psychology, counseling, psychiatry, social work, or cognate fields. Prerequisites: junior or senior status and consent of the instructor. One course. *Lakin*

165S. Neurobiology of Learning and Memory (B). (NS) Readings in the neurophysiological and neurochemical underpinnings of the memory process. Current and classical research and review articles. Prerequisite: Psychology 91 or 103. One course. *Swartzwelder*

167S. Brain Mechanisms of Behavior (B, C). (NS) General physiological principles of brain organization in relation to behavioral processes from sensation to concept formation. Discussions of original readings from seminal papers in the early nineteenth century to the present. Prerequisite: Psychology 91 or 103. One course. *R. Erickson*

169S. Eating Behavior and Disorders (B). (SS) The interaction of taste and smell with obesity, anorexia, and nutritional status including that of the elderly. Prerequisite: Psychology 91 or 103. One course. *S. Schiffman*

170S, A-R, U-Z. Selected Problems. New courses not yet in the bulletin are designated as 170S or 270S depending on their level. Since all faculty offer these courses, their contents vary accordingly. Different courses indicated by the letter. One course. *Staff*

171T, A-R. Tutorials. Small group discussions about influential books and articles in psychology. The availability of tutorials, their content, and the instructors will be announced before registration. Different courses indicated by letter. Consent of instructor required. Pass/fail grading only. Half course. *Staff*

173S. Theoretical Issues in General Psychology (C, D, P). (SS) In-depth consideration of certain issues that cut across different areas of psychology: Are human beings bound to act in their own interests, or can they be genuinely altruistic? What do we mean when we talk about the mind or mental states, how do we know about these states in others as well as ourselves, and how are these states related to the body? Is psychology a science? Should it try to be, can it be, a science? One course. *L. Wallach*

174S. Infancy (C, D, P). (SS) Covers perceptual, cognitive, social, and motor development during the first two years of life, with a focus on the connections between developments in these four areas. Prerequisites: Psychology 97 or 105 and one other psychology course. One course. *Eckerman or Needham*

175S. Psychophysiology (B). (NS) How emotional and cognitive processes are expressed physiologically, and how this can be used to understand how the brain works. Special attention given to how electrical activity of the brain is related to memory, selective attention, and decision making. A course in biological psychology (for example, Psychology 91) provides the proper background, but is not required. One course. *Marsh*

176S. Great Ideas in Psychology (C). (SS) Ideas in psychology drawn from various content areas (for example, perception, personality, motivation, biological bases, social, cognitive, developmental, learning, clinical) and various methodological approaches (for example, experimental, introspection, observation, interview, longitudinal, simulation). Not open to students who have taken Psychology 204S. Prerequisites: junior or senior psychology-major status and consent of instructor. One course. *Day*

177S. Human Sexuality (B). (NS) The biological, endocrinological, and physiological correlates of human sexual behavior including sexual differentiation, pubertal development, adult male and female sexual behavior, premenstrual syndrome, menopause, sexuality and aging, homosexuality, and deviant sexual behavior. Prerequisite: Psychology 91 or 103 or background in biology. C-L: Study of Sexualities. One course. *Staff*

178S. The Psychology of Exceptional Ability (C, D). (SS) Examines various approaches to the study of exceptional intellectual, cognitive, academic, and artistic abilities, with an emphasis on children and adolescents traditionally referred to as gifted, talented, or precocious. Psychosocial and emotional aspects and consequences of exceptional ability. The Duke University Talent Identification Program (TIP) will be a focus as well as a resource. Prereq-

uisites: courses in either developmental or cognitive psychology and statistics recommended. One course. *Goldstein*

180S. Advanced Topics in the Psychology of Gender (P). (SS) Study of one broad domain in the psychology of gender, exact content area to vary by semester. Emphasis on how gender influences human experience and behavior. Possible areas include theory of gender differences; victimology; gender role socialization; psychological issues in marriage, sexuality, and parenthood; biosocial aspects of gender; gender and mental health; and achievement. Prerequisites: Psychology 106 and consent of instructor. C-L: Women's Studies. One course. *Fischer, Hamilton, or Roth*

181A, S. Methods in Behavioral Neurobiology (B). (NS) Research in neural bases of behavior using simple biological systems as models for more complex behavior. Laboratory experience in experimental methodologies. Observational techniques in study of natural behaviors and neurophysiological recording and stimulation. Not open to students who have had Psychology 149S. Prerequisites: Psychology 91 or 103 or background in biology, and consent of instructor. One course. *W. G. Hall or staff*

181B, S. Research Methods in Animal Learning (B, C). (NS) Behavioral experiments with rats and pigeons. Basic tools and methods used in study of animal learning (experimental design, methodology, data analysis, basic theoretical interpretation of results.) Prerequisite: Psychology 111 or 115 strongly recommended. One course. *Higa*

182A, S. Cognitive Laboratory (C). (SS) Human cognition; language, memory, problem solving, and other higher mental processes. Not open to students who have had Psychology 143S. Prerequisite: Psychology 92, 107, 112, or 123. One course. *Hasher, Lockhead, Rubin, or Serra*

182B, S. Perception Laboratory (C). (SS) Experimental approaches to basic phenomena of perception as determined by conditions in the external situation and the person: biological and psychological. Not open to students who have had Psychology 148S. Prerequisite: Psychology 112 or consent of instructor. One course. *Lockhead*

182C, S. Neural Networks and Psychology (B, C). (NS) Several neural networks applied to perception, learning, and cognition. Neural architectures including adalines, perceptron, backpropagation, autoassociative nets, Boltzman machines, reinforcement nets, competitive learning, and adaptive resonance theory. Computer simulations of the different networks. Prerequisites: Mathematics 31 and 32. One course. *Schmajuk*

183A, S. Research Methods in Developmental Psychology (D). (SS) Students who have had Psychology 140S not eligible for enrollment. Prerequisite: Psychology 97 or 105 or consent of instructor. One course. *Eckerman or L. Wallach*

183B, S. Child Observation (D). (SS) Introduction of research methods used to study children, with particular emphasis on observational techniques. Prerequisites: Psychology 97 or 105 and consent of instructor. One course. *Putallaz*

184A, S. Research Methods in Health and Clinical Psychology (P). (SS) Contemporary approaches to psychologically based research in health and mental health. Survey, laboratory, and/or narrative self-report methodologies. Class research projects. Not open to students who have taken Psychology 146S. Prerequisites: Psychology 99 and Statistics 110 or the equivalent. One course. *Blumenthal or Keefe*

185A, S. Experimental Approaches to Personality (P). (SS) Methods applied to personality research. Not open to students who have taken Psychology 145S. Prerequisite: one course in psychology. One course. *M. Wallach*

185B. S. Research Methods in Social Psychology (P). (SS) Study of empirical research methods used to study contemporary issues in social psychology, including both experimental and nonexperimental strategies. Not open to students who have taken Psychology 147S. Prerequisite: Psychology 99, 108, or 116. One course. *Curran or staff*

190S. History of Modern Psychology (B, C, D, P). (SS) Major developments in psychology from the late nineteenth century to the present, with emphasis on the history of ideas. The experimental beginnings of psychology as a science, psychoanalysis, evolutionary thinking, behaviorism, cognitive psychology, and the psychology of social issues. Prerequisite: prior course in psychology or consent of instructor. One course. *H. Schiffman or L. Wallach*

191, 192, 193, 194. Independent Study. Directed reading and research. 191, 192: junior year fall, spring; 193, 194: senior year fall, spring. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

198, 199. Distinction Program Sequence (G). A formal training/supervision component of the Distinction Program in Psychology. Consent of director of undergraduate studies required. Pass/fail grading only. Half course each. *Staff*

For Advanced Undergraduates and Graduates

202S. Autobiographical Memory (C). (SS) A review and critical analysis of the literature, theory, and empirical study of autobiographical memory within cognitive psychology. Consent of instructor required. One course. *Rubin*

203S. Seminar in Cognitive Neuroscience (C). (SS) Relating empirical findings in perception and cognition to structures and processes in the brains of animals and people. Emphasis on vision. Consent of instructor required. One course. *Lockhead*

205S. Children's Peer Relations (D). (SS) An examination of the empirical literature with emphasis on the functions that peers serve for children, the developmental course of these relationships, the clinical ramifications and possible explanations for inadequate peer relations (including an examination of the family's role), and interventions used to improve children's relationships with their peers. Consent of instructor required. One course. *Putallaz*

206S. Pediatric Psychology (D, P). (SS) The conceptual and methodological bases for the field. Case material illustrating how developmental, biological, and psychosocial processes act together in child health and illness. Focus on adjustment and coping with illness and treatments related to cystic fibrosis, sickle cell disease, cancer, diabetes, and seizure disorders. Consent of instructor required. One course. *Thompson*

207S. Topics in Psychobiology (B). (NS, SS) Prerequisites: senior standing, Psychology 49S (Psychobiology), and consent of instructor. See C-L: Distinguished Professor Course 207S. One course. *Brodie*

209S. The Cognitive Psychology of Oral Traditions (C). (SS) The structure of songs and genres from oral traditions and the processes used in their composition, transmission, and recall, analyzed from the perspective of cognitive psychology. Consent of instructor required. One course. *Rubin*

210S. Cognition (C). (SS) Schematic view of cognitive psychology plus intensive study of two to three specific research topics such as forms of representation, individual differences, and problem-solving models. Emphasis on alternative experimental and theoretical approaches. Prerequisites: Psychology 92 or 107 for undergraduates and consent of instructor. One course. *Day*

211S. Neural Development and Comparative Cognition (B, C). (NS) Current research on neural development of cognitive processing in several sensory systems (for example, auditory, visual, and olfactory systems), and in several species (for example, aplysia, song birds, rats, cats, monkeys, and humans) with regard to how attention and memory processes develop. Both the normal ontogeny of cognitive ability and differentiation that is altered during an early sensitive period of development. Prerequisites: three courses in biological psychology for undergraduates and consent of instructor. One course. *C. Williams*

212S. Human Memory (C). (SS) Classical and modern literature, data, and theories relating to mechanisms of information processing, storage, and retrieval. Consent of instructor required. One course. *Hasher or Rubin*

214S. Development of Social Interaction (D, P). (SS) Major concepts and methods pertaining to early social development, emphasizing human social behavior and a developmental psychobiological approach. Consent of instructor required. One course. *Eckerman*

215S. Cognitive Development (C, D). (SS) Intensive critical evaluation of major approaches to the development of knowledge, including those of Piaget, Thomas Kuhn, Vygotsky, Eleanor Gibson, Kohlberg, and others. Consent of instructor required. One course. *L. Wallach*

218S. Personality, Stress, and Disease (P). (SS) The interaction between person and social environment as a contributor to development of physical disease. Both epidemiological and laboratory-based research considered. Prerequisites: Psychology 98 or 109A for undergraduates and consent of instructor. One course. *R. B. Williams*

220S. Psycholinguistics (C). (SS) Selected topics such as neurolinguistics, linguistic versus pictorial representation, individual differences, oral versus written expression, language and personality, and the language-thought interaction. Prerequisites: Psychology 134 for undergraduates and consent of instructor. C-L: Linguistics. One course. *Day or Mazuka*

223S. Animal Learning and Cognition: A Neural Network Approach (B, C). (NS) Several connectionist theories of animal learning and cognition. Neural network theories of classical conditioning; the concepts of models of the environment, prediction of future events, reliable and salient predictors, redundancy reduction, competition for limited capacity short-term memory, mismatch between predicted and observed events, stimulus configuration, inference generation, modulation of attention by novelty, and timing. Neural networks of operant conditioning; the concepts of goal-seeking mechanisms, response-selection mechanisms, and cognitive mapping. How neural network models permit simultaneous development of psychological theories and models of the brain. Prerequisites: Mathematics 31, 32 for undergraduates and consent of instructor. One course. *Schmajuk*

224S. Timing and Time Perception (B, C). (NS) Selected topics dealing with the psychobiological bases of internal clocks used to time in the-seconds-to-minutes range. Impact of neural pacemakers systems on cognitive processes involved in divided attention, temporal memory, and the determination of the quantal unit of time and/or consciousness. Consent of instructor required. One course. *Meck*

225S. Ingestion: Behavior and Neurobiology (B). (NS) Selected topics dealing with the behavioral and neural organization of feeding and drinking. Reading typically includes: ethological and behavioral system perspectives on ingestive behavior organization; the learning and conditioning literature relevant to experience effects on feeding and feeding development; recent research on the physiological and metabolic control of ingestion; and current considerations of the neurobiological basis of ingestive behavior. Emphasis on understanding ingestion as a sequence of behavior components whose control is both hierarchical and dynamic. Prerequisites: Psychology 91 or 103 for undergraduates and consent of instructor. One course. *W. G. Hall*

227S. Behavioral Physiology: Basic Systems (P). (SS) Organ systems review of physiology, emphasizing the role of the central nervous system and behavior in physiological function. Prerequisites: Psychology 91 or 103 or 159S for undergraduates and consent of instructor. One course. *Surwit*

228S. Behavioral Treatment of Disease (P). (SS) Critical review of the literature on the effective behavioral interventions in the treatment of physical illness. Focus on the role of the psychologist in medical settings. Consent of instructor required. One course. *Surwit*

230S. Social Behavior of Animals (B, D, P). (NS) Developmental, ecological, and physiological aspects of territorial, sexual, parental, and aggressive behavior. Consent of instructor required. One course. *C. Erickson*

234S. Advanced Personality (P). (SS) Selected topics of current interest concerning empirical research on personality. Strategies for the definition of research questions and the evaluation of research progress. Consent of instructor required. One course. *M. Wallach*

255S. Life-Span Development (C, D, P). (SS) Analysis of development across the life span. Origins and course of cognitive and emotional development; components of personality and social development. Applications to models of both normative and pathological development. Prerequisites: Psychology 97 or 105 for undergraduates and consent of instructor. One course. *Costanzo or Goldstein*

261S. Advanced Learning Theory (C). (SS) Selected topics in the data and theory of basic processes of learning, memory, and motivation in animals and humans. Emphasis on the nature of theory construction and evaluation, and the relation of current perspectives to older ones. Consent of instructor required. One course. *Holland*

262S. Minority Mental Health: Issues in Theory, Treatment, and Research (P). (SS) Survey and discussion of theoretical, research, and clinical issues in minority mental health with special emphasis on African-Americans. Prerequisites: Psychology 119 for undergraduates and consent of instructor. One course. *Anderson or McLoyd*

270S, A-R, U-Z. Selected Problems. New courses not yet in the bulletin are designated as 170S or 270S depending on level. Since all faculty offer these courses, their contents vary accordingly. Different courses indicated by the letter. Consent of instructor required. One course. *Staff*

273. Statistics I (G). (QR) Foundations of probability and statistical inference. Introduction to the general linear model via multiple regression. Emphasis on application via statistical computing with SAS. Prerequisites: Psychology 117 or Statistics 110 for undergraduates and consent of instructor. One course. *Curran or staff*

274. Statistics II (G). (QR) Basic and advanced ANOVA models via the GLM. Broad-based overview of multivariate models, including MANOVA, canonical correlation, discriminant analysis, and factor analytic models. Emphasis on application and use of computer packages. Prerequisites: Psychology 117 or Statistics 110 and Psychology 273 for undergraduates and consent of instructor. One course. *Curran or staff*

280S. History and Systems of Psychology (B, C, D, P). (SS) The birth, course, present, and future of psychology from the ancient philosophers to neural networks and neuroanatomy. Prerequisites: Psychology 11, 91, 92, 97, 98, 99, 103, 105, 107, 108, or 109 for undergraduates and consent of instructor. One course. *Serra*

288S. Advanced Topics in Social Science and Law (P). (SS) Study of one broad domain in social science and law; exact content area to vary by semester. Emphasizes how empirical findings in social science are translated and used by the legal system. Possible areas include

women's legal issues, family violence, expert testimony, employment discrimination. Prerequisites: Psychology 129 for undergraduates and consent of instructor. One course. *Fischer*

COURSES CURRENTLY UNSCHEDULED

- 110. Applied Psychology (P). (SS)
- 128. Memory Disorders (C). (SS)
- 152S. Community Psychology (D, P). (SS)
- 168S. Body, Brain, and Auditory Perception (B). (NS)
- 172S. Pain: Coping and Adaptation (H). (SS)
- 186A, S. Measurement of Individual Differences (B, C, D, P). (SS)
- 208S. Emotion (P). (SS)
- 217S. Advanced Social Psychology (P). (SS)
- 264S. Gender, Hormones, and Health (P). (SS)
- 289S. Psychology of Prevention (P). (SS)

THE MAJOR

For the A.B. Degree

Major Requirements. Ten courses in psychology (eight of which must be at the level of 100 or above) are required for the major, which is devised to provide depth and breadth, a small group course in psychology, and familiarity with the quantitative methods involved in psychology. For breadth, the student is required to take two introductory and survey courses including: (1) either 91 (Biological Bases of Behavior) or 92 (Cognitive Psychology), and (2) 97 (Developmental Psychology), or 99 (Personality and Social Behavior). These introductory and survey courses define four areas of concentration in psychology. For depth, the student is required to take at least two courses in one of these areas in addition to the introductory and survey course. For instruction in small groups, the student is to take at least one seminar (number 140S and above, including 200-level courses). It is advisable that this seminar be in the student's area of concentration. For quantitative techniques used in psychology, the student is to take one of the following: Mathematics 136; Sociology 133; Statistics 110, 112, 113, 210B, 213; or Psychology 117. One of these courses will count toward the ten courses required of the major. Each student will be introduced to the methods used in psychology by taking one of the following courses: Psychology 101, or one of the 180-series laboratory courses.

A student guidebook describing the curriculum in detail is available from the director of undergraduate studies. Of the ten psychology courses required for the major at least eight must be taken in the department at Duke; others, if approved, may count toward the 34 credits needed for graduation.

For the B.S. Degree

As for the A.B. degree, with the following additions: (1) Mathematics 32 or equivalent; (2) six natural science courses in at least two of the following mathematics/natural science departments: mathematics (100-level or above, in addition to the statistics requirement, above), computer science (100-level or above), chemistry, physics, biological anthropology and anatomy, and biology; (3) at least three of the six mathematics/natural science courses must be numbered 100 or higher; (4) at least one course that involves extensive laboratory or fieldwork (for example, experimental methods or independent research).

THE MINOR

Requirements. Five courses in psychology including the breadth requirement of two introduction and survey courses and the depth requirement of two more courses following one of these introduction and survey courses as described above for the major, plus one elective course numbered 100 or above.

Neurosciences Concentration within B.S. Degree

Students completing a B.S. in psychology may elect to fulfill the requirements for a specialized concentration in neuroscience within the psychology major. Completion of that concentration would be indicated on the official transcript. For information contact the director of the Neurosciences Program, Professor Warren Meck.

Human Development Program

Students completing a B.S. or B.A. in psychology who are interested in human development may elect to fulfill the requirements for a Human Development Program certificate. The goal of this interdisciplinary program is to foster an understanding of how biological, psychosocial, and cultural processes act together in development throughout the life course, and of the complementarity of disciplinary perspectives. Completion of the program certificate would be indicated on the official transcript. For information contact the director of the Human Development Program, Professor Thompson.

Relation to Other Departments and Programs

Many psychology courses count toward concentrations in other areas as well as neurosciences and human development, for example: the certificate in early childhood education studies, the animal behavior concentration in the biology major, and the primatology concentration in the biological anthropology and anatomy major.

Independent Study

A program of individualized readings or an empirical research project may be carried out by arrangement with a faculty supervisor and enrollment in Psychology 191-194. A written plan of the program must be approved by the supervisor and the director of undergraduate studies. At most only one of these independent study courses may count toward the area of concentration requirement, and only two may count toward the major.

Honors /Distinction

The graduation with distinction program is based on a special project, usually independent studies, the written form of which is reviewed by a committee composed of three members including the faculty mentor. See the director of undergraduate studies for details.

Public Policy Studies (PPS)

Professor Ascher, *Chair*; Associate Professor Lipscomb, *Director of Undergraduate Studies*; Professors Behn, Clotfelter, Cook, Fleishman (law), Healy (environment), Hough (political science), Kuniholm, Ladd, Magat (business), Mickiewicz, Pearsall (engineering), Price (political science), and Schroeder (law); Associate Professors Conrad, Leitzel, Mayer, McConahay, and Moore (business); Assistant Professors Hamilton, Korstad, Miller, Pickus, Ramachandran, Roselius, and Stangl (statistics); Professor Emeritus Barber (political science); Professors of the Practice Beckum, Boothby, Brown, Harris, Jones, Raspberry, Sanford, Stubbing, and Tifft; Visting Professor Felsman; Visiting Assistant Professors Fischle and Kofodimos; Visiting Professors of the Practice Geller and Gergen; Visiting Assistant Professor of the Practice Rudy; Lecturers O'dor and Payne; Visiting Lecturers Ahearne, Bates, Besse, Blount, Bovbjerg, Daniels, Dodson, Dorsen, Emison, Eudy, Frey, Ganote, Goodman, Hart, Henderson-James, Johnson, Lampert, Lin, Montgomery, Popovich, Prak, Reid, Shaikun, Stevens, Thomasson, Wallace, Wright, and Yeoman; Senior Research Scientist Vaupel

A major is available in this department.

Courses in public policy are open to all students providing that any prerequisites are met.

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

55D. Introduction to Policy Analysis. (SS) Basic concepts of analytical thinking including quantitative methods for assessing the probabilities of outcomes and appraising policy alternatives. Illustrated by problems faced by busy decision makers in government, business, law, medicine. One course. *Hamilton, Leitzel, Lipscomb, Mayer, or Miller*

100A. East Asian Political Economy: Institutions, Networks, and Politics. (SS) (Taught in Korea and Taiwan.) See C-L: Sociology 188C; also C-L: Comparative Area Studies and Political Science 100V. One course. *Staff*

105S. American Communities: A Documentary Video Approach. (AL, SS) Prerequisites: English 101A and any one of the following: Film and Video 100S, 101S, or 104S. See C-L: Film and Video 105S; also C-L: Cultural Anthropology 134S, History 150B, and Political Science 156S. One course. *Staff*

107. Environmental Politics and Policies in the Industrial World. (SS) See C-L: Political Science 107; also C-L: Comparative Area Studies. One course. *McKean*

110. Economic Analysis for Public Policy-Making. (SS) Application of microeconomic analysis to public policy areas, including agriculture, housing, taxation, and income redistribution. (Not open to students who have taken Economics 149, which also fulfills Public Policy Studies microeconomic requirement.) Prerequisite: Economics 52D or equivalent. One course. *Clotfelter, Conrad, Cook, Ladd, Leitzel, Lipscomb, or Roselius*

114. Political Analysis for Public Policy-Making. (SS) Analysis of the political and organizational processes which influence the formulation and implementation of public policy. Alternative models. Prerequisite: Political Science 90A, 91, 101, or equivalent. C-L: Political Science 145. One course. *Ascher, Hamilton, Mayer, Mickiewicz, or Miller*

115. Introduction to North America. (CZ, SS) See C-L: North American Studies 110; also C-L: Cultural Anthropology 129, Economics 115, History 108F, Political Science 119, Romance Studies 125, and Sociology 109. One course. *Shanahan*

116. Policy Choice as Value Conflict. (SS) Theoretical and practical problems in decision making in relation to conflicts of value and of interest. The manifestation of norms deriving from professional ethics, ideology, law, and other sources in such policy issues as welfare, environmental management, and national defense. One course. *Blount, Korstad, Payne, Pickus, or Rudy*

116D. Policy Choice as Value Conflict. (SS) Same as Public Policy Studies 116 except instruction is provided in two lectures and one small discussion meeting each week. One course. *Korstad, Payne, or Pickus*

131S. Law, Culture, and the Russian Legal Tradition. (CZ, SS) Open only to students in the FOCUS Program. See C-L: Russian 157S. One course. *Newcity*

138S. Public-Private Leadership. (SS) Leadership of and relationships between organizations in the public, private nonprofit, and business sectors. Includes government privatization, nonprofit commercial ventures, socially responsible business activities, hybrid organizations, and cross sector collaborative initiatives. One course. *Brown*

139S. Business Leadership. (SS) Effective business leadership, including individual leadership and companies as leaders in society. Not open to students who have taken Public Policy Studies 146. One course. *Brown*

140. Women as Leaders. (SS) Intellectual and experiential exploration of the theory and practice of leadership, with an emphasis on the special role gender plays. Topics include:

authority, conflict, power, and an assessment of each student's potential for leadership. Small group work required. C-L: Women's Studies. One course. *Kofodimos*

141. Social Policy in America. (SS) Public policies in the United States that affect individuals in their roles as family members and workers. Social problems associated with poverty, unemployment, old age, distressed urban and rural communities, discrimination, and changing family patterns; theories seeking to explain these problems. History of public policies adopted to deal with such social problems. Current policies, their budgetary impact, their effectiveness, and the political debate that surrounds them. One course. *Clotfelter or Korstad*

142S. Chinese Economy in Transition. (SS) Prerequisites: Economics 1 or 51, and 2 or 52. See C-L: Economics 142S. One course. *Yang*

143D. Environmental Politics Beyond Borders (B). (SS) See C-L: Political Science 148D; also C-L: Comparative Area Studies. One course. *McKean*

145. Leadership, Policy, and Change. (SS) Ethical and practical problems of leadership, including motivation, organizational morale, and strategies for large-scale change. Historical and modern case studies, literary examples, and political and psychological theory. One course. *Payne*

145D. Leadership, Policy, and Change. (SS) Same as Public Policy Studies 145 except instruction provided in two lectures and one discussion meeting each week. One course. *Payne*

146. Leadership Development. (SS) Effective leadership processes in different types of organizations and situations. Includes theory and personal application. Not open to students who have taken Public Policy Studies 139S. One course. *Brown*

147. Environmental Politics and Policies in the Developing World. (SS) See C-L: Political Science 147; also C-L: Comparative Area Studies. One course. *McKean or Miranda*

148S. Environmental Policy, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, to Public Policy Studies 149. Half course or one course. Prerequisite: Public Policy Studies 149. Variable credit. *Staff*

149. United States Environmental Policy. (SS) An overview of the major environmental legislation in the United States. Topics include: air and water pollution, hazardous waste, agriculture, wildlife, and institutions. Political, economic, ethical, and scientific analysis. Consent of instructor required. C-L: Environment 149. One course. *Besse or Miranda*

150S. Policy, Philanthropy, and the Arts. (SS) Democratic and aesthetic values in relation to past and present patterns of public, corporate, and philanthropic support for the arts. The uses of art criticism and political theory in evaluating subsidies, grants, tax incentives, and censorship. Consent of instructor required. One course. *Payne*

151. Administration of Justice. (SS) The history, structure, and function of the American legal system; emphasis on the courts as an institution for the resolution of disputes and administration of justice. Considers a variety of legal problems in both the criminal and civil law, examining policy choices that shape contemporary jurisprudence. Consent of instructor required. One course. *Montgomery*

152S. Administration of Justice, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, or Research Triangle Park, NC, area to Public Policy Studies 151. Half course or one course. Prerequisite: Public Policy Studies 151. Variable credit. *Staff*

154S. Free Press and Public Policy. (SS) Policy problems and conflicts involved in applying First Amendment principles to print and electronic journalism. Topics include libel,

privacy, national security, fair trial, and antitrust. Consent of instructor required. C-L: Film and Video. One course. *Stevens*

155S. Free Press and Public Policy, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, to Public Policy Studies 154S. Half course or one course. Prerequisite: Public Policy Studies 154S. Variable credit. *Staff*

156. Health Economics. (SS) Prerequisite: Economics 149 or Public Policy Studies 110. See C-L: Economics 156. One course. *Sloan*

157. Health Policy. (SS) Analysis of health care problems and policies. Consent of instructor required. One course. *Henderson-James*

158S. Health Policy, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, to Public Policy Studies 157. Half course or one course. Prerequisite: Public Policy Studies 157. Variable credit. *Staff*

159. State and Local Public Policy. (SS) How state and local governments pay for public services. Financing education and transportation programs, the use of municipal bonds for capital projects, the design of intergovernmental aid programs, and state and local tax policy. Consent of instructor required. One course. *Clotfelter*

161S. State and Local Public Policy, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, or Research Triangle Park, NC, area to Public Policy Studies 159. Half course or one course. Prerequisite: Public Policy Studies 159. Variable credit. *Staff*

163S. Telecommunications Policy and Regulation. (SS) Broadcast policies, the rise of cable television, spectrum allocation and authorization, and developments in common carrier telecommunications. Consent of instructor required. C-L: Film and Video. One course. *Prak*

164S. Telecommunications Policy, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, to Public Policy Studies 163S. Half course or one course. Prerequisite: Public Policy Studies 163S. Variable credit. *Staff*

165. American International Economic Policy. (SS) Prerequisites: Economics 1 or 51 and 2 or 52. See C-L: Economics 165. One course. *Bronfenbrenner*

167. International Policy. (SS) Relationships among organizations and agencies involved in international political and economic affairs, focusing on selected problems of international policy. Consent of instructor required. One course. *Ascher, Kuniholm, Leitzel, or Mayer*

168S. International Policy, Summer Internship. Pass/fail grading only. Follow-up seminar in Washington, DC, to Public Policy Studies 167. Half course or one course. Prerequisite: Public Policy Studies 167. Variable credit. *Staff*

170S, 171S. Poverty and Public Education. (SS) Contemporary issues in leadership and public policy. Social science research and data analysis techniques. Research projects examining policy issues concerning health, community, education, social services, family, employment and economy, and criminal justice and politics. For students interested in nonprofit, public sector, service-oriented programs that focus on youth and education, such as tutoring, Big Brother/Big Sister, and after-school programs. Prerequisite: for Public Policy Studies 171S/Education 181S: Public Policy Studies 170S/Education 180S. C-L: Education 180S, 181S. One course each. *Beckum*

175S. The Palestine Problem and United States Public Policy. (CZ) Identification of Arab and Zionist perceptions, alternatives available to American decision makers, interest

group pressures on United States policies, historical analysis as a means to improve public policy. C-L: Comparative Area Studies and History 159S. One course. *Kuniholm*

176S. American Communities: A Photographic Approach. (SS) A documentary approach to the study of American communities through individual photographic projects centered around a community of the student's choosing. Consent of instructor required. Not open to students who have taken Art 118S. C-L: Visual Arts 118S and Film and Video. One course. *Harris or Sartor*

177S. Advanced Documentary Photography. (SS) An advanced course for students who have taken Public Policy Studies 176S or have had substantial experience in documentary fieldwork. Students complete an individual photographic project and study important works within the documentary tradition. Not open to students who have taken Art 119S. Prerequisite: Visual Arts 118S, Public Policy Studies 176S, or consent of instructor. C-L: Visual Arts 119S. One course. *Harris*

180S. Writing for the Media. (SS) Workshop on writing news stories, editorials, and features for the print media. Consent of instructor required. C-L: Film and Video. One course. *Eudy or Reid*

181S. Advanced News Reporting. (SS) Students report, write, and rewrite six in-depth stories during the semester. Assignments designed to explore investigative reporting techniques and the issues that arise in writing longer, more complex stories. Prerequisite: Public Policy Studies 180S or consent of instructor. One course. *Bates and Yeoman*

187S. The Canadian Health Care System. (SS) See C-L: Canadian Studies 185S; also C-L: Comparative Area Studies, Cultural Anthropology 185S, Economics 185S, History 108E, Political Science 185S, and Sociology 185S. One course. *Warren or staff*

188. The Psychology of Political Symbols. (SS) See C-L: Political Science 188. One course. *McConahay*

190. Internship. For students working in a public agency, political campaign, or other policy-oriented group under the supervision of a faculty member. Prior consent of assistant director of internships, placement, and alumni and director of undergraduate studies required. Pass/fail grading only. One course. *Staff*

191, 192. Independent Study. Directed reading and research. One course each. *Staff*

193, 194. Independent Study. Directed reading and research for seniors. One course each. *Staff*

195, 196. Selected Public Policy Topics. (SS) One course each. *Staff*

195S, 196S. Selected Public Policy Topics. (SS) Seminar version of Public Policy Studies 195, 196. One course each. *Staff*

197. Marine Policy. (SS) Formal study of policy and policy-making concerning the coastal marine environment. History of specific marine-related organizations, legislation, and issues and their effects on local, regional, national, and international arenas. Topics explored through use of theoretical and methodological perspectives, including political science, sociology, and economics. Consent of instructor required. (Given at Beaufort.) C-L: Environment 276 and Marine Sciences. One course. *Orbach*

198S, 199S. Senior Honors Program. (SS) Special topics. Consent of director of undergraduate studies required. Prerequisite: for 199S: Public Policy Studies 198S. One course, half course, respectively. *Cook*

For Seniors and Graduates

216S. Economics of Education. (SS) Prerequisite: Economics 149 or Public Policy Studies 110. See C-L: Economics 216S. One course. *Clotfelter*

218. Macroeconomic Policy. (SS) Survey of macroeconomic theory and analysis of policies designed to reduce unemployment, stimulate economic growth, and stabilize prices. Conventional monetary and fiscal instruments, employment policies, and new policies designed to combat inflation. C-L: Economics 218. One course. *Leitzel or McElroy*

222. Statistics and Data Analysis for Policymakers. (QR) Not open to students who have had Mathematics 136 or Statistics 110A, 110B, 112, 113, 114, 210B, or 213. See C-L: Statistics 210A. One course. *Roselius or Stangl*

236. Public Management I: Managing Public Agencies. (SS) Operations management, information and performance, personnel management, public sector marketing. One course. *Behn*

238. Public Budgeting and Financial Management. (SS) Fund accounting for government; techniques of financial analysis, including break-even analysis, cost accounting, cash-flow analysis, and capital budgeting; and governmental budgeting, including the budgetary process and reforms, and the budget crunch in the public sector. One course. *Stubbing*

241. Reporting the American People. (SS) Critical analysis of the sources of information the media rely upon in reporting opinion and policy preferences: opinion polls, bellwethers, informed elites. Includes the design and execution of a public opinion poll on a topic of local or national interest. One course. *McConahay*

242S. Chinese Economy in Transition. (SS) Prerequisites: Economics 1 or 51, and 2 or 52. See C-L: Economics 242S. One course. *Yang*

243S. Media and Democratization in Russia. (SS) Analysis of policy, content, and audiences of mass media in the Soviet Union and post-Soviet Russia. Focus on such issues as media access, media markets, television and electoral campaigns, and relationship to political authority. C-L: Political Science 276S. One course. *Mickiewicz*

251S. Regulation of Vice and Substance Abuse. (SS) Focus on activities that have traditionally been defined as vices (including drinking, smoking, use of opiates, gambling, pornography, prostitution) and the problems of regulating and controlling them in a free society. Evaluation of social costs and benefits of various alternative policy interventions. Prerequisite: Economics 149 or Public Policy Studies 110. C-L: Economics 251S. One course. *Cook*

255S. Health Policy Analysis. (SS) Group analysis of a current health-policy problem. Project involves background research, data acquisition, analysis, writing, and presentation of a substantial policy report. Designed for candidates seeking the undergraduate certificate in health policy. Consent of instructor required. One course. *Conover*

257. United States Policy in the Middle East. (SS) From World War II to the present with a focus on current policy options. C-L: Comparative Area Studies and History 296. One course. *Kuniholm*

258. International Environmental Regimes. (SS) See C-L: Political Science 271; also C-L: Comparative Area Studies. One course. *McKean*

259S. State and Local Public Finance. (SS) Analysis of state and local revenue sources, intergovernmental fiscal relations, budgets and expenditures, fiscal aspects of economic development, and the municipal bond market. Policy topics include financing schools and

transportation systems, tax policy, and current fiscal issues. Prerequisite: Public Policy Studies 217 or equivalent. C-L: Economics 259S. One course. *Ladd*

260. Economic Policy Analysis of Nonrenewable Resources. (SS) Economic analysis of nonrenewable resources, development, and exploration. Relationship between natural resources and other economic sectors. Emphasis on public policy tax and regulatory policy, natural resources in developing economies and foreign investment in the mining sector. Prerequisite: Economics 149, Public Policy Studies 110, or Public Policy Studies 232. C-L: Economics 260. One course. *Conrad*

261. Evaluation of Public Expenditures. (SS) Basic development of cost benefit analysis from alternative points of view, for example, equity debt, and economy as a whole. Techniques include: construction of cash flows, alternative investment rules, inflation adjustments, optimal timing and duration of projects, private and social pricing. Adjustments for economic distortions, foreign exchange adjustments, risk and income distribution examined in the context of present value rules. Examples and cases from both developed and developing countries. C-L: Economics 261 and Environment 272. One course. *Conrad*

262S. Seminar in Applied Project Evaluation. (SS) Initiate, develop, and perform a project evaluation. Range of topics include measuring the social cost of deforestation, the B1 Bomber, a child nutrition program, the local arts program. Prerequisite: Economics 285 or Public Policy Studies 261. C-L: Economics 262S. One course. *Conrad*

264S. Research Seminar: Topics in Public Policy I. (SS) Selected topics. One course. *Staff*

265S. The Process of International Negotiation. (SS) Negotiations between governments or between international institutions and governments. Explorations of historic cases, such as the United States–Canada free trade negotiation, the INF talks, and Camp David Summit. C-L: Canadian Studies and Political Science 265S. One course. *Mayer*

266. Comparative Social Policy. (SS) An examination of social and health policies in advanced industrial countries. Focus on understanding the comparative methods and role of the state, market, and voluntary sector in policy development and implementation. C-L: Comparative Area Studies and Political Science 266. One course. *Staff*

267S. Policy-Making in International Organizations. (SS) Emphasis on international financial institutions such as the World Bank and the International Monetary Fund. C-L: Political Science 267S. One course. *Ascher*

269S. The Regulatory Process. (SS) Theories in economics, political science, and law to examine the structure, conduct, and performance of U.S. regulatory agencies. Emphasis on why decisions are delegated to agencies, the degree to which regulators behave strategically, and the impact of regulatory actions on society. Analysis of what is effective in a regulatory agency. C-L: Political Science 268S. One course. *Hamilton*

271S. Schools and Social Policy. (SS) Public schools as instruments of public policy. Economic and statistical analysis of the educational production process. Consideration of alternative school reforms. One course. *Ladd*

272. Resource and Environmental Economics. (SS) Prerequisite: introductory course in microeconomics. See C-L: Environment 270; also C-L: Economics 270. One course. *Kramer*

274. Resource and Environmental Policy. (SS) Development of a policy analysis framework for studying resource and environmental policy. Political institutions, interest group theory, public choice theory, role of economics in policy analysis, ethics and values. Application to current and historical U.S. policy issues. Prerequisite: Environment 270, Public Policy Studies 272, or consent of instructor. C-L: Environment 274. One course. *Staff*

275S. Seminar in Urban Politics and Urban Public Policy. (SS) See C-L: Political Science 274S. One course. *Orr*

280S. Philanthropy, Voluntarism, and Not-for-Profit Management. (SS) An examination of the role and functioning of the not-for-profit sector in relation to both the public sector and the private for-profit sector in dealing with significant social problems. C-L: Law 585S. One course. *Fleishman*

282S. Seminar in North American Studies. (CZ) See C-L: North American Studies 283S; also C-L: Cultural Anthropology 283S, History 283S, Political Science 285S, Romance Studies 283S, and Sociology 283S. One course. *Staff*

283S. Congressional Policy-Making. (SS) See C-L: Political Science 283S. One course. *Gronke*

284S. Public Policy Process in Developing Countries. (SS) Policy-making patterns in less developed countries; examples from Latin America, Africa, and Asia. C-L: Comparative Area Studies and Political Science 284S. One course. *Ascher*

285. Land Use Principles and Policy. (SS) Consideration of four major roles of land in the United States: as a producer of commodities, financial asset, component of environmental systems, and location of development. Analysis of market allocation of land, market failure, role of public planning and regulation. C-L: Environment 285. One course. *Healy*

286S. Economic Policy-Making in Developing Countries. (SS) Fiscal, monetary, and exchange rate policies in less developed countries; issues in public policy toward natural resources and state-owned enterprises. Prerequisite: Economics 149 or Public Policy Studies 110. C-L: Comparative Area Studies and Economics 286S. One course. *Conrad or Ramachandran*

288S. Current Issues in United States Federal Tax Policy. (SS) Prerequisite: Economics 149 or consent of instructor. See C-L: Economics 288S. One course. *Sieg*

290. Glasgow Seminar in Public Policy. (SS) Analysis of the British political system and important public policy problems in Britain including: privatization, Britain and the European community, and economic and social policy. (Taught in Scotland.) Prerequisites: Public Policy Studies 55D, three of the core courses (PPS 110, 112, 114 or 116) and consent of director of undergraduate studies. One course. *Staff*

Skills Courses

81. Essentials of Public Speaking. Basics of and practice in oral presentations, with particular attention to the gathering and organization of speech materials. Preference given to freshmen and sophomores. Does not apply toward public policy studies major. Consent of instructor required. One course. *O'dor*

82. Essentials of Public Speaking. Similar to Public Policy Studies 81, but for juniors and seniors. Not open to students who have taken Drama 81 or 82, or Public Policy Studies 81. Does not apply toward public policy studies major. One course. *O'dor*

83S. Argumentation. Analysis, investigation, evidence, reasoning and refutation, and other communication strategies. Consent of instructor required. Does not apply toward public policy studies major. One course. *O'dor*

COURSES CURRENTLY UNSCHEDULED

112. Statistics and Public Policy. (QR)

179S. Refugees and World Politics. (SS)

185. American Diplomacy from the Kennedy Administration to the Present. (SS)

- 186S. Shaping the News. (SS)
- 204S. Ethics in Political Life. (SS)
- 221. Decision Analysis for Public Policymakers. (SS)
- 237. Public Management II: Managing Public Agencies. (SS)
- 240S. Analyzing the News. (SS)
- 245S. Leadership Tutorial. (SS)
- 252S. United States Strategic Arms Policy. (SS)
- 253. The Politics of Health Care. (SS)
- 254. Transportation Planning and Policy Analysis. (SS)
- 278. Human Service Bureaucracies. (SS)

INTERNSHIP COURSES

The internship courses provide students with an opportunity to develop a basic understanding of one or more public policy areas, to apply that understanding in a job during the summer, and to return to the classroom to build on this knowledge and experience. Normally, students take a pre-internship course during the spring semester of their junior year as one of several substantive courses including international policy, telecommunications policy, health policy, administration of justice, state and local policy, environmental policy, and free press and public policy. Students then follow up their pre-internship course with a summer internship.

In order to participate in the summer internship, all majors must have completed Public Policy Studies 55D and three of the four core courses (Public Policy Studies 110, 112, 114, or 116). This requirement may be waived by the director of undergraduate studies for transfer students or others in unusual circumstances. Applications for enrollment in the internship program must be completed in the early fall and approved by the assistant director of internships, placement, and alumni.

Stipends are usually provided for all public policy studies majors enrolled in a pre-internship course and any one of the following summer courses: Public Policy Studies 148S, 152S, 155S, 158S, 161S, 164S, or 168S. All majors are encouraged to take an advanced follow-up course in the area of their summer internship.

THE MAJOR

The public policy studies major is an interdisciplinary social science program designed to provide students with the skills, analytical perspectives, and descriptive information needed to deal effectively with major contemporary social problems. The course of study familiarizes the student with the kind of contribution each of several disciplines (political science, economics, social psychology, applied mathematics, history, and ethics) can make to one's understanding of contemporary policy issues such as air pollution, crime, and international trade disputes. Opportunities are provided, both in the classroom and through field experiences, for students to integrate this material and apply it to the analysis of specific public policy issues.

Students majoring in public policy participate in a variety of learning experiences including seminars, lecture and discussion classes, individual study, policy workshops, and an internship. In addition, students are urged to participate actively in programs sponsored by the Sanford Institute of Public Policy to supplement material covered in class. As a matter of policy, students are asked to evaluate teaching and course content and are provided both formal and informal opportunities to shape the program and curriculum.

Prerequisites. Economics 2D or 52D; Political Science 90A, 91, 101 or equivalent; and Public Policy Studies 55D.

Major Requirements. Public Policy Studies 110, 112, 114, 116, plus four 100/200-level elective courses; one of these must be a 200-level course. Statistics 110C, Statistics 110A, Statistics 110B, Statistics 112, Statistics 10D, or Political Science 138 is an acceptable substitute for Public Policy Studies 112. Economics 149 is an acceptable substitute for Public Policy

Studies 110. Political Science 90A, 91, 101 or equivalent is a prerequisite for Public Policy Studies 114. A satisfactory policy-oriented field experience approved by the assistant director of internships, placement, and alumni is required. (See Internship Courses above.)

Honors/Distinction

For graduation with departmental distinction students are required to complete an honors seminar and an honors project. To be awarded distinction, a student must receive no less than an A- on the research paper and have a final 3.5 grade point average in the public policy studies major. The proposed program of research must be approved in advance by the director of undergraduate studies.

Religion (REL)

Professor Lawrence, *Chair*; Professor Corless, *Director of Undergraduate Studies*; Professors Clark, Hillerbrand, Kort, C. Meyers, E. Meyers, Osborn, Sanders, Surin (literature), and Wintermute; Associate Professors Bland, Martin, McCollough, and Peters; Assistant Professors Cornell, Hart, Joyce, and Nickerson; Lecturer Shows

A major or minor is available in this department.

Study in the Department of Religion arises from the recognition that religion, although it takes many forms, is a constitutive element of human existence individually and collectively. The curriculum is organized so that courses at the 40 level provide an introduction to the major religious traditions, those with significant representation and influence throughout the world. Courses at the 100 level are divided into those which focus on specific traditions, texts, and contexts and those which deal with religious data from a theoretical perspective.

All introductory courses and courses at the 100 level, with the exception of those courses specially designated, are open to all undergraduates. Courses at the 200 level are open to upperclassmen with the consent of the instructor.

40. Judaism. (CZ) Introduction to Judaic civilization from its origins to modern times. Not open to students who have taken Religion 51. C-L: Judaic Studies and Women's Studies. One course. *Staff*

41. Christianity. (CZ) Introduction to Christianity in history and modern times. One course. *Hillerbrand or staff*

42. Islam. (CZ) Introduction to Islam in history and modern times. One course. *Cornell or Lawrence*

43. Hinduism. (CZ) Introduction to Hinduism in history and modern times. One course. *Staff*

44. Buddhism. (CZ) Introduction to Buddhism in history and modern times. Not open to students who have taken Religion 149. One course. *Corless or staff*

45. Religions of Asia. (CZ) Problems and methods in the study of religion, followed by a survey of the historical development, beliefs, practices, and contemporary significance of the Islamic religion and religions of south and east Asia. Not open to students who have taken Religion 57. C-L: Comparative Area Studies. One course. *Cornell, Lawrence, Nickerson, or staff*

46. Religions of China and Japan. (CZ) Traditional religion in China and Japan and its interaction with Sino-Japanese Buddhism. Not open to students who have taken Religion 141. C-L: Comparative Area Studies. One course. *Nickerson*

47. Taoism. (CZ) Introduction to Taoism in history and modern times in mainland China and Taiwan. One course. *Nickerson*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

71A, 72A. Seminar for First-and Second-Year Students: Global Religions. (CZ) Topics and instructors to be announced. One course each. *Staff*

71B, 72B. Seminar for First-and Second-Year Students: Traditions, Texts, and Contexts. (CZ) Topics and instructors to be announced. One course each. *Staff*

71C, 72C. Seminar for First-and Second-Year Students: Theoretical Perspectives. (CZ) Topics and instructors to be announced. One course each. *Staff*

TRADITIONS, TEXTS, AND CONTEXTS

100. The Old Testament/Hebrew Bible. (CZ) Historical, literary, and theological investigations. Not open to students who have taken Religion 50. C-L: Judaic Studies. One course. *C. Meyers, E. Meyers, Peters, or Winternute*

101A. Selected Studies in the Bible: Pentateuch. (CZ) Analysis and interpretation of major themes and figures, with special consideration of the narratives dealing with human and Israelite origins. Not open to students who have taken Religion 100. C-L: Judaic Studies. One course. *Staff*

101B. Selected Studies in the Bible: Prophets. (CZ) Analysis and interpretation of representative issues and personalities in the historical and prophetic books. Not open to students who have taken Religion 101. C-L: Judaic Studies. One course. *Staff*

101C. Selected Studies in the Bible: Writings. (CZ) Analysis and interpretation of representative forms and ideas, with particular attention to wisdom literature and psalms. Not open to students who have taken Religion 102. C-L: Judaic Studies. One course. *Staff*

102. The New Testament. (CZ) Origins, development, and content of thought. Not open to students who have taken Religion 52. One course. *Martin, Sanders, or staff*

103. Islam in East and Southeast Asia. (CZ) The development of Islam and Islamic civilization in Southeast and Eastern Asia from the rise of Islam to modern times. One course. *Cornell*

104. Religion in the West. (CZ) Judaism, Christianity, and Islam in their historical and cultural contexts, with their precursors and successors. Not open to students who have taken Religion 56 (Religion in the West). One course. *Corless*

106. Jesus and the Synoptic Gospels. (CZ) The gospel tradition in the New Testament. One course. *Staff*

108. The Life and Letters of Paul. (CZ) Paul's role in the expansion of the Christian movement, the most important aspects of his thought, and his continuing influence. One course. *Martin or Sanders*

109. Women in the Biblical Tradition: Image and Role. (CZ) C-L: Judaic Studies and Women's Studies. One course. *C. Meyers*

111. The Historical Jesus. (CZ) Historical research on the life of Jesus. One course. *Martin or Sanders*

112. Muslim Minorities in Society: From Asia to America. (CZ) The historical formation, legal status, and political options of Muslim minorities in non-Muslim nation-states. Special attention to China, the Philippines, India, Europe, and North America. Intra-Muslim and international perspectives, looking at the networks of exchange and communication since the end of colonialism. C-L: Comparative Area Studies. One course. *Cornell and Lawrence*

115-116. Introduction to Biblical Hebrew. (FL) (Divinity School courses open to undergraduates with consent of instructor.) Elements of phonology, morphology, and syntax. Exercises in reading and writing Hebrew. 116: study of the weak verb; exegetical treatment of the Book of Jonah. C-L: Judaic Studies. Two courses. *Staff*

117. Mahayana Buddhism. (CZ) Special features of the doctrine and practice of Buddhism in Tibet, China, Korea, and Japan, with an account of their origins in the Indian subcontinent. One course. *Corless*

120. History of the Christian Church. (CZ) Crucial events, issues, structures, and writings that have shaped the Christian community and influenced Western civilization from the time of the early church to the present. C-L: History 156B. One course. *Hillerbrand*

121. Roman Catholic Tradition. (CZ) History of the tradition from early days through the reforms of Vatican II with emphasis on the experiences of American Catholics, concluding with a discussion of current concerns about gender equality, sexuality, and the post-Vatican II crisis of authority. Not open to students who have taken Religion 53. One course. *Joyce*

124. Religion in American Life. (CZ) A historical survey, with emphasis on the ways that religious experiences, beliefs, and traditions have found expression in religious communities and institutions, and in American public life. One course. *Joyce*

125. Women and Sexuality in the Christian Tradition. (CZ) A historical survey of Christian attitudes and practices from New Testament times to the present. C-L: Comparative Area Studies, Study of Sexualities, and Women's Studies. One course. *Clark*

126. Russian Orthodoxy. (CZ) See C-L: Russian 129. One course. *Pelech*

127. Protestant Traditions. (CZ) A survey of the historical development of Protestant theologies and denominations. Not open to students who have taken Religion 54. One course. *Clark or Hillerbrand*

128. Christians in Crisis. (CZ) Christian thought and debate on, and theological analysis of, such contemporary issues as abortion, creationism, homosexuality, liberation, poverty, racism, and sexism. One course. *Osborn or staff*

130. Late Antique Christian Art. (AL) Not open to students who have taken Art 130. See C-L: Art History 130; also C-L: Classical Studies 130. One course. *Wharton*

133. The Foundations of Post-Biblical Judaism. (CZ) History, religion, and literature of Pharisaic and sectarian Judaism from the time of Ezra to Rabbi Judah. C-L: Judaic Studies. One course. *E. Meyers*

134. Jewish Mysticism. (CZ) The main historical stages, personalities, texts, and doctrines from rabbinic to modern times. C-L: Comparative Area Studies, Judaic Studies, and Medieval and Renaissance Studies. One course. *Bland*

135. Jewish Religious Thought. (CZ) Doctrines, dialectics, and religious attitudes of pre-Enlightenment theologians. C-L: Comparative Area Studies, Judaic Studies, and Medieval and Renaissance Studies. One course. *Bland*

136. Contemporary Jewish Thought. (CZ) Modern Jewish thought from Mendelssohn to the present, with particular reference to American thinkers. C-L: Comparative Area Studies and Judaic Studies. One course. *Bland or E. Meyers*

137. An Introduction to Judaism in the Greco-Roman World. (CZ) History, religion, and literature of the Jews in Palestine from 200 B.C.E. to 66 C.E. Not open to students who have taken Religion 277. One course. *Sanders*

138. Women and Religion in America. (CZ) Women's religious experience in America, from the lives of early American "good wives" to the work of Catholic nuns in the nineteenth century and the spirituality of Jewish feminists in modern America, concluding with a discussion of contemporary issues, for example, feminist theology, sexuality, and admission of women to pastoral leadership. Not open to students who have taken Religion 118. C-L: Women's Studies. One course. *Joyce*

139. Women in Islam: Fact and Fiction. (CZ) See C-L: Asian and African Languages and Literature 190; also C-L: African and African-American Studies 160, Comparative Area Studies, and Women's Studies. One course. *Cooke*

140. Religions of India. (CZ) Major religious traditions of the subcontinent: Hinduism, Buddhism, Jainism, and Islam. C-L: Comparative Area Studies. One course. *Lawrence or staff*

144, 145. Introduction to the Civilizations of Southern Asia. (CZ) Not open to students who have taken Religion 160, 161. See C-L: Asian and African Languages and Literature 160, 161; also C-L: Comparative Area Studies; Cultural Anthropology 101, 102; and History 193, 194. One course each. *Khanna or staff*

146, 147. Introduction to Islamic Civilization. (CZ) Extensive survey of Muslim peoples and institutions. 146: the Middle Eastern origins and cultural attainments of medieval Islam. 147: modern developments and global features of the Islamic world. Not open to students who have taken Religion 162, 163. C-L: Comparative Area Studies; Cultural Anthropology 147, 148; History 101G, 102G; and Medieval and Renaissance Studies. One course each. *Cornell, Lawrence, and staff*

148. Alternative Religion in America. (CZ) Focus on both the historical development of particular traditions (for example, Mormon, Adventist, New Age) and general themes in American religious life (for example, relationship between religion and health, appeal of communitarian and millenarian movements). One course. *Joyce or staff*

149. Introduction to Christian Theology and Ethics. (CZ) Analysis and interpretation of faith and practice. Not open to students who have taken Religion 59. One course. *Kort, McCollough, or Osborn*

150. Mysticism. (CZ) The mystical element of religion: Hinduism, Buddhism, Christianity, and Islam. Not open to students who have taken the former Religion 143 (Mysticism). C-L: Comparative Area Studies. One course. *Staff*

152A. Islamic Mysticism: Arabic (Western) Tradition. (CZ) Sufism as an ascetical protest movement that affected the growth of Islam. C-L: African and African-American Studies 151 and Comparative Area Studies. One course. *Cornell*

152B. Islamic Mysticism: Perso-Indian (Eastern) Traditions. (CZ) Sufism as an ascetical protest movement that affected the worldwide growth of Islam. C-L: Comparative Area Studies. One course. *Lawrence*

153. From the African Kraal to the African-American Church. (CZ) The religious transition and adaptation of the West African diaspora in America. C-L: African and African-American Studies 153. One course. *Hart*

154. African-American Religion and Identity. (CZ) Religious formation of African-American identity, from slavery to the present time; focus on the diverse religious traditions of the African diaspora—including Vodun, Santeria, Judaism, Christianity, and Islam. C-L: African and African-American Studies 152. One course. *Hart*

158. The Reformation of the Sixteenth Century. (CZ) A survey of the changes in sixteenth-century European society, with particular reference to the continent, which grew out of the movement for religious reform and renewal. Focus on new developments in

theology and religion and their relationship to society. Not open to students who have taken Religion 167. C-L: History 156A and Medieval and Renaissance Studies. One course. *Hillibrand*

165. Religion and Psychology. (SS) Contributions of major psychological theories to an understanding of religion, especially Christianity. Not open to students who have taken Religion 61. One course. *Shows*

170. Problems of Religious Thought. (CZ) Analysis of uses of *know, true, mind, body, time, person, love, meaning*, in modern Western culture as introduction to religious reflection. One course. *Staff*

171. Religion and Society. (CZ) Introduction to the interface between religion and its social contexts. Issues such as social organizations, politics, systems of value, and the arts from a global and comparative perspective. Not open to students who have taken Religion 63. One course. *Staff*

173. Religious Movements. (CZ, SS) See C-L: Cultural Anthropology 138. One course. *Ewing*

174. Apocalypse Then and Now: Ancient and Modern Apocalypticism. (CZ) An interdisciplinary examination of ancient Jewish and Christian apocalypticism combined with study of occurrences of apocalyptic images and themes in modern fiction, politics, art, film, and social movements. The various functions of apocalyptic in ancient and modern cultures and conflicts. Not open to students who have taken Religion 104. One course. *Martin*

175. Archaeology and Art of the Biblical World. (CZ) The material culture of ancient Palestine as it relates to the Hebrew Bible, the New Testament, and early Judaism. Not open to students who have taken Religion 110. C-L: Comparative Area Studies and Judaic Studies. One course. *C. Meyers or E. Meyers*

176. Principles of Archaeological Investigation. (CZ) Supervised fieldwork, visits to other excavations, introduction to ceramic chronology, numismatics, and other related disciplines. Excavation of a late Roman village in Galilee. Offered in Israel, only in the summer. Not open to students who have taken Religion 131D. C-L: Judaic Studies. One course. *C. Meyers or E. Meyers*

177. Perspectives in Archaeology. (CZ) Major trends and issues in archaeology, literature and material culture, history and process, and applications of archaeology to modern society. Focus on the material remains of the past and traditional and modern methods of their analysis. May be offered abroad in Duke's Summer Program in Israel or Greece. Not open to students who have taken Religion 99. C-L: Classical Studies 99 and Judaic Studies. One course. *C. Meyers, E. Meyers, Younger, and staff*

178. Moses, Socrates, Buddha, Jesus, Gandhi. (CZ) A critical study of paradigmatic individuals—figures who are held to exemplify the virtues or whose lives are held up as examples for others to follow, and of virtue, ethics, politics, and social criticism. One course. *Hart*

179S. Ethical Issues in Twentieth-Century America. (CZ) A critical examination of ethical themes, with special emphasis on public policy. For participants in the Twentieth-Century America FOCUS Program only. Not open to students who have taken Religion 114S. One course. *McCollough*

180. Ethical Issues in the Life Cycle. (CZ) Human development viewed in religious, ethical, and psychological perspectives. Not open to students who have taken Religion 155. One course. *McCollough*

181. Ethical Issues in Social Change and Public Policy. (CZ) American moral tradition and factors in social change in the normative analysis of public policy, with a consideration of specific ethical issues. Not open to students who have taken Religion 151. One course. *McCullough*

182. Medicine and Religion in American Society. (CZ) A theological and comparative study of selected ethical issues in health policy: the profession of medicine, institutional organization and services, and medical practice. Not open to students who have taken Religion 159. One course. *Joyce*

183. Comparative Approaches to Global Issues. (SS) Not open to students who have taken Religion 121. See C-L: Comparative Area Studies 125; also C-L: Cultural Anthropology 125, History 137, Political Science 125, and Sociology 125. One course. *Staff*

184. Religion and Film. (CZ) A study of the relationship of motion pictures and religion. The inquiry will focus on the portrayal of organized religion; expressions of religious life; and religious topics, such as God, evil and morality, in motion pictures. Not open to students who have taken Religion 62. One course. *Hillerbrand*

185. Special Topics in Religion. Topics vary from semester to semester. One course. *Staff*

186. The Theology and Fiction of C. S. Lewis. (AL, CZ) A study of texts of cultural criticism, fantasy fiction, and theological and moral argument by C. S. Lewis, their dependence on the cultural situation in which they were deployed, and the reasons for their continuing force and wide appeal. One course. *Kort*

187. Atmosphere and Mystery in Twentieth-Century English Fiction. (AL) Narrative atmosphere in English fiction of this century in relation to beliefs about circumstances that limit and determine the human world. (Summer program in England.) Not open to students who have taken English 138. C-L: English 132B. One course. *Kort*

188. Religion in Recent American Fiction. (AL, CZ) Religious elements in recent literature. One course. *Kort*

189. Autobiography and Religious Identity. (CZ) A study of contemporary autobiographies by Jewish, Catholic, and Protestant writers, of theories concerning autobiography and religious identity, and of autobiography as a kind of writing. One course. *Kort*

190S. The Family in Christian History. (CZ) Open to sophomores, juniors, and seniors. Consent of instructor required. See C-L: Distinguished Professor Course 197S; also C-L: Women's Studies. One course. *Clark*

191, 192. Independent Study. For freshmen and sophomores with departmental approval. One course each. *Staff*

193, 194. Independent Study. For juniors and seniors with departmental approval. One course each. *Staff*

195A, 196A. Junior-Senior Seminars: Global Religions. (CZ) Topics and instructors to be announced. One course each. *Staff*

195B, 196B. Junior-Senior Seminars: Traditions, Texts, and Contexts. (CZ) Topics and instructors to be announced. C-L: Judaic Studies. One course each. *Staff*

195C, 196C. Junior-Senior Seminars: Theoretical Perspectives. (CZ) Topics and instructors to be announced. One course each. *Staff*

197-198. Honors Research. Consent of the director of undergraduate studies required. Two courses. *Staff*

199. Colloquium for Majors. A survey of currently important theories of religion and methodologies employed in the study of religion. Restricted to majors. One course. *Hill-
brand*

For Seniors and Graduates

201. Studies in Intertestamental Literature. (CZ) Selected documents of the Apocrypha and Pseudepigrapha examined exegetically and theologically in their relation to postexilic Judaism. Consent of instructor required. One course. *Wintermute*

202. Language and Literature of Dead Sea Scrolls. (CZ) A study in interpretation. Prerequisite: a knowledge of Hebrew. One course. *Wintermute*

204. Origin. (CZ) The systematic and apologetic writings of an important Alexandrian thinker and exegete of the third century. One course. *Clark*

207. Hebrew Prose Narrative. (FL) Focus on the grammar, syntax, and prose style of classical Hebrew composition; a comparative reading of modern and precritical Jewish and Christian commentary. Readings spanning the spectrum from the early Hebrew prose of Genesis and I and II Samuel to the late compositions of Chronicles and Ezra-Nehemiah. One year of classical Hebrew required. C-L: Judaic Studies and Old Testament 207. One course. *Staff*

208. Classical Hebrew Poetry: An Introduction. (FL) The problem of defining and understanding what is "poetic" in classical Hebrew. Theories of Hebrew poetry from Lowth to Kugel and O'Connor illustrated with readings from Psalms, Isaiah, Job, and Jeremiah. One year of classical Hebrew required. C-L: Judaic Studies and Old Testament 208. One course. *Staff*

212. Theories of Religion. (CZ) Late nineteenth- and twentieth-century theories, interpretations, and approaches to the study of religion. One course. *Hart*

216. Syriac. (CZ) The script and grammar, with readings from the Syriac New Testament and other early Christian documents. Prerequisites: some knowledge of Hebrew and Aramaic. One course. *Wintermute*

217. Islam in India. (CZ) History and thought of major Indian Muslims from Biruni to Wali-Ullah, with special attention to the role of Sufism. An introduction to selected Muslim scholars and saints who contributed to the interaction between Islam and Hinduism in northern India during the second millennium A.D. C-L: Comparative Area Studies. One course. *Lawrence*

218. Religions of East Asia. (CZ) Shinto, Taoism, Confucianism, and East Asian Buddhism studied phenomenologically in relation to the Axial Age. C-L: Comparative Area Studies. One course. *Corless*

219. Augustine. (CZ) The religion of the Bishop of Hippo in late antiquity. C-L: Medieval and Renaissance Studies. One course. *Clark*

220. Rabbinic Hebrew. (FL) Interpretive study of late Hebrew, with readings from the Mishnah and Jewish liturgy. C-L: Judaic Studies. One course. *E. Meyers or staff*

224B. Comparative Semitic II. (FL) An introduction to the morphology and syntax of classical Arabic and the Semitic languages of Palestine-Syria, together with a consideration of their relationships to Hebrew. One course. *Wintermute*

226B. Exegesis of the Greek New Testament (Romans). (CZ) Consent of instructor required. One course. *Staff*

226F. Exegesis of the Greek New Testament (I and II Corinthians). (CZ) Consent of instructor required. One course. *Staff*

229S. Old Church Slavonic. (FL) See C-L: Russian 203S; also C-L: Linguistics. One course. *Staff*

230. Sainthood in Comparative Perspective. (CZ) Examination of sainthood, saint cults, and sacred biography from a multidisciplinary and global perspective. One course. *Cornell*

231S. Seminar in Religion and Contemporary Thought. (CZ) Analytical reading and discussion of such critical cultural analysis as is found in the works of Polanyi, Arendt, Trilling, and others, with appraisal of the relevance of theological inquiry. One course. *Staff*

232S. Religion and Literary Studies. (AL) Theories concerning the relation of religion to literary forms, particularly narrative. One course. *Kort*

233. Modern Narratives and Religious Meanings. (AL) A study of kinds of religious meaning or significance in representative American, British, and continental fiction of the first half of the twentieth century. One course. *Kort*

234. Early Christian Asceticism. (CZ) The development of asceticism and monasticism in the first six centuries of Christianity. C-L: Women's Studies. One course. *Clark*

235. Heresy: Theological and Social Dimensions of Early Christian Dissent. (CZ) One course. *Clark*

238. Witchcraft in New England. (CZ) Examination of historical interpretations of the "problem" of witchcraft in New England with attention to the interpretive issues confronted in the study of religious communities and the contributions of gender studies, sociology, anthropology, and psychology to the study of history. One course. *Joyce*

241. Classical Islamic Theology and Ethics. (CZ) Topics include unity of God, free will and predestination, nature of divine revelation, Aristotelian and Neoplatonic influences on Islamic thought, Sunni "orthodoxy," Andalusian peripateticism, Islamic monism, ethical rationalism, ethical voluntarism, and Islamic moral philosophy. C-L: African and African-American Studies 241. One course. *Cornell*

243. Archaeology of Palestine in Biblical Times. (CZ) Investigation of selected material remains from the Bronze Age to the Persian period. Trends in biblical studies, with particular attention to methodological considerations and current developments. C-L: Judaic Studies. One course. *C. Meyers*

244. Archaeology of Palestine in Hellenistic-Roman Times. (CZ) The study of material and epigraphic remains as they relate to Judaism in Hellenistic-Roman times, with special emphasis on Jewish art. C-L: Judaic Studies. One course. *E. Meyers*

245. Special Topics in Religion. (CZ) Subject varies from semester to semester. One course. *Staff*

248. Theology of Karl Barth. (CZ) A historical and critical study of Barth's theology. One course. *Osborn*

253. Feminist Theory and the Study of Christianity. (CZ) Nineteenth- and twentieth-century feminist theories and their implications for Christian doctrine and biblical interpretation. C-L: Women's Studies. One course. *Clark and McClintock-Fulkerson*

254. Justice, Law, and Commerce in Islam. (CZ) Islamic approaches to the legal and ethical regulation of social life. C-L: African and African-American Studies 254 and Law 568. One course. *Cornell*

258. Coptic. (FL) Introduction to the Sahidic dialect with selected readings from Christian and Gnostic texts. Prerequisite: one year of Greek or consent of instructor. One course. *Wintermute*

262. Special Topics in Gender and Religion. (CZ) Study of gender and sexualities; emphasis on cultural and social constructions of womanhood, masculinity, and sexual identities in the American context. C-L: Women's Studies. One course. *Joyce*

274A. Philosophies, Sciences, and Theologies of the European Enlightenment: Descartes to Kant. (CZ) Western theological thought since the Scientific Revolution, with emphasis on developments and movements that occurred in the seventeenth and eighteenth centuries. Descartes, Locke, Leibniz, Spinoza, Hume, Vico, Lessing, Herder, and Kant. One course. *Surin*

275S. Topics in Early Christian and Byzantine Art. (AL) Consent of instructor required. Not open to students who have taken Art 233S. See C-L: Art History 233S; also C-L: Classical Studies 230S and Medieval and Renaissance Studies. One course. *Wharton*

283. Islam and Modernism. (CZ) Cultural, religious, and ideological forces which shape Muslim responses to modernism. C-L: Comparative Area Studies. One course. *Lawrence*

284. The Religion and History of Islam. (CZ) Origins and development of the Islamic community and tradition, with particular attention to the religious element. C-L: Comparative Area Studies. One course. *Cornell or Lawrence*

COURSES CURRENTLY UNSCHEDULED

123. Issues in Early Christian History. (CZ)

132D. Palestine in Late Antiquity. (CZ)

143. History and Religions of North Africa. (CZ)

221. Readings in Hebrew Biblical Commentaries. (CZ)

224A. Comparative Semitic I. (FL)

228. Twentieth-Century Continental Theology. (CZ)

239. Introduction to Middle Egyptian I. (FL)

240. Introduction to Middle Egyptian II. (FL)

261. Islam in the African-American Experience. (CZ)

264. The Sociology of the Black Church. (SS)

274B. Philosophies, Sciences, and Theologies after the European Enlightenment: Schleiermacher to Troeltsch. (CZ)

277. Judaism in the Greco-Roman World. (CZ)

280. The History of the History of Religions. (CZ)

288. Buddhist Thought and Practice. (CZ)

297. Philosophical and Theological Discourses on Modernity. (CZ)

THE MAJOR

For students matriculating in the fall 1996 semester and thereafter:

Major Requirements. At least ten courses, two of which are in Global Religions, one from division 1 (40-42) and one from division 2 (43-46). At least eight courses must be taken at the 100 level, including (a) colloquium (199), (b) one 100-level course in theoretical perspectives, and (c) one 100-level course in traditions, texts, and contexts. One of the remaining courses must be a junior-senior seminar, independent study, or a 200-level course. The student, in consultation with an assigned advisor and with the advisor's approval, will choose a concentration of four related courses which constitute a thematic or methodological concentration on a particular aspect of religion.

Honors/Distinction

The department offers work leading to graduation with distinction. For further information consult the director of undergraduate studies and the section on honors in this bulletin.

THE MINOR

Requirements. The religion minor offers students specializing in another department or program the opportunity to enrich their studies with a wider perspective in religions. The requirements consist of a minimum of five religion courses, at least four of which must be at the 100-level or above.

Foreign Languages

To prepare for graduate or professional study of religion, the department recommends that students complete at least four courses in college level study, or the equivalent, of a foreign language. Master of Arts and Doctor of Philosophy programs often require examination in one or two foreign languages. Students planning to attend a theological seminary should note that knowledge of biblical languages, as well as Latin, frequently is presupposed or required. Those planning to pursue studies of Asian religions should begin appropriate language study as part of their undergraduate preparation.

Romance Studies (RS)

Professor Mignolo, *Chair*; Associate Professor Longino, *Director of Undergraduate Studies*; Professors Bell, Caserta, Garci-Gómez, Jameson, Kaplan, Moi, Orr, Osuna, Pérez Firmat, Stewart, Tetel, and Thomas; Associate Professors Finucci, Greer, Moreiras, Sieburth, and Solterer; Assistant Professors Fischer, Jonassaint, Nouzeilles, and Vilarós; Associate Professor of the Practice and Director of Language Programs Tufts; Assistant Professor of the Practice and Coordinator of the Spanish Language Program Caballero; Assistant Professor of the Practice Damasceno; Research Associate Professor Keineg; Adjunct Associate Professor Byrd; Visiting Research Professor Dorfman

Majors (in French Studies, Italian Studies, and Spanish) and minors are available in this department.

French, Italian, and Spanish 22, 76, or an Achievement or Placement Test score of 600 in French, 600 in Italian, and 630 in Spanish, or a SAT II score of 640 in French, 630 in Italian, or 660 in Spanish, are prerequisites for all courses at or above the 100 level not taught in English. Students who by reason of foreign residence have had special opportunities in French, Italian, or Spanish must be classified by the director of undergraduate studies. The accelerated language courses 21 and 22 provide an introduction to the language. They are recommended for students who wish to acquire proficiency in a second foreign language before entering graduate school. In literature, one credit is granted for a score of 4 and two credits for a score of 5 (French or Spanish 70, 71) on the examination of the advanced placement program. In language, one advanced placement credit (French or Spanish 76) is granted for scores of 4 and 5.

FRENCH (FR)

1-2. Elementary French. (FL) Understanding, speaking, reading, and writing French. Language laboratory for recording-listening practice. Two courses. *Staff*

12. Review of Elementary French. (FL) Intensive review of first-year French. Open only to students with a placement or achievement score of 380-440. May not be taken for credit by students who have taken 1-2. One course. *Staff*

14. Intensive Study of French. (FL) Covers the entire program of elementary French study in one semester using a media-based approach. Primary focus on oral skill development, with additional work on reading and writing. Two courses. *Staff*

14A. Intensive Study of French. (FL) Understanding, speaking, reading, and writing French. Offered only in the Duke in Québec Summer Program. Placement of returning students intending to continue in French studies determined by interview. Two courses. *Staff*

15. Intensive French. (FL) Covers the entire program of intermediate language study in one semester using a media-based approach. Continued emphasis on oral skill development and the introduction of progressively longer and more challenging reading and writing activities. Prerequisite: French 14 or the equivalent. Two courses. *Staff*

21. Accelerated Elementary French. (FL) Basic grammar structures in one semester; emphasis on oral work. Prerequisite: four semesters or the equivalent of another foreign language or consent of instructor. One course. *Staff*

22. Accelerated Intermediate French. (FL) Review of basic grammar; emphasis on reading, with some practice in writing. Prepares students to enroll in courses at the 100 level. Prerequisite: French 21 or consent of instructor. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

63. Intermediate French. (FL) Grammar review, reading, and oral practice, including laboratory experience. Prerequisite: French 2, 12, or achievement or placement test score of 450-540. One course. *Staff*

70, 71. Introduction to Literature. (FL) One or two course credits for Advanced Placement in literature. One course each.

76. Advanced Intermediate French. (FL) Oral practice, reading, composition. Prerequisite: French 63 or achievement or placement test score of 550-590. One course. *Staff*

100. Cultural and Literary Perspectives. (FL) Designed to give students leaving intermediate French the reading and writing skills necessary to enter 100-level courses in French studies. A close reading of cultural and literary texts which focus on themes such as daily life, philosophy, art, etc. One course. *Staff*

101, 102. Introduction to French Literature. (AL, FL) An introduction to the major writers of the French literary tradition. Selections and complete works of poetry, fiction, theater, and essay. 101: Middle Ages through the eighteenth century. 102: nineteenth and twentieth centuries. Lectures and discussions; short essays and tests. Conducted in French. One course each. *Staff*

103S, 104S. Discussions of Readings. (AL, FL) Selected topics. Open only to freshmen and sophomores. One course each. *Staff*

105. Topics in French Thought and Culture from the Middle Ages to 1900. (CZ, FL) Topics such as class and social relationships; the nation and centralization; authority and the state; the rise of public education; language and centralization; history of ideas and mentalities; film and media. Readings in French from documents. One course. *Staff*

106. Topics in Modern French Thought and Culture: 1900 to the Present. (CZ, FL) Topics such as racism, colonialism and its aftermath; postwar ideology; women's movement; communication development; elitist technology; labor and leisure; community and privacy; environmental issues. One course. *Staff*

107S. Contemporary Ideas. (CZ, FL) Readings and discussion of French works which have provoked political or intellectual thought in recent years. For freshmen and sophomores only. C-L: Comparative Area Studies. One course. *Staff*

110. Advanced Grammar and Composition. (FL) A systematic study of the structure of formal French. Practice in writing. One course. *Thomas or staff*

111S. French for Current Affairs. (FL) Problems and controversies in today's France. Readings, discussions, and exposés. One course. *Keineg or staff*

113S. French for Business. (FL) Current issues in French business and commerce. C-L: Comparative Area Studies. One course. *Staff*

117. French Phonetics. (FL) Sounds, rhythm, intonation. Individual practice in language laboratory. Readings in phonetic theory. One course. *Thomas*

118. Advanced Translation and Stylistics. (FL) Differences between French and English patterns of expression. Levels of usage. Practice in translation. Prerequisite: French 110 or equivalent or consent of instructor. One course. *Thomas or staff*

137. Aspects of Contemporary French Culture. (CZ, FL) Offered only as part of summer program in Paris. C-L: Comparative Area Studies. One course. *Staff*

139. French Civilization. (CZ, FL) The institutions and culture of France from the Middle Ages to the present. Readings and discussions in French. C-L: Comparative Area Studies. One course. *Keineg or Tetel*

140. France in the Making: Language, Nation, and Literary Culture in Premodern Europe. (CZ, FL) Fifteenth-century France, a transitional world where a national language was crystallizing, ideas and images of French sovereignty were taking shape, and literature became a state affair. Urban theater, political polemics, Joan of Arc, courtly culture. C-L: Medieval and Renaissance Studies. One course. *Solterer*

141S, 142S. French Literature. (AL, FL) Topics to be announced. Open to juniors and seniors. One course each. *Staff*

143. Aspects of French Literature. (AL, FL) Concentration on single authors, genres, movements, or themes. Topics to be announced. Offered only as part of summer program in Paris. One course. *Staff*

144. Medieval Fictions. (AL, FL) Introduction to the literature and culture of medieval France. Topics include Old French and the rise of literacy, allegory, the invention of romantic love, social class and literary taste, modern renditions of the premodern past. C-L: Medieval and Renaissance Studies. One course. *Solterer*

145S. Topics in Renaissance Literature and Culture. (AL, FL) Topics may include: women writers, love and self-knowledge, carnival and the grotesque, in search of Rome, text as political and religious pamphlet. C-L: Comparative Area Studies and Medieval and Renaissance Studies. One course. *Tetel*

146S. Montaigne and Self-Portraiture. (AL, FL) A reading of some *essais* in the light of the self-portrait in Renaissance art. C-L: Medieval and Renaissance Studies. One course. *Tetel*

147. Seventeenth-Century Fictions of Women. (AL, FL) Works by and about women in the early modern period taking into account the *querelle des femmes*, the *préciosité* movement, and women's contribution to the development of the novel and the epistolary genre. C-L: Women's Studies. One course. *Longino*

148. French Drama of the Seventeenth Century. (AL, FL) The political content of plays by Corneille, Molière and Racine, with relation to court culture, social movements, and to

relations between the Court of Louis XIV and the Porte of the Ottoman Empire. C-L: Drama 171 and Medieval and Renaissance Studies. One course. *Longino*

152. The Early French Novel. (AL, FL) Origins and evolution of the novel in the seventeenth and eighteenth centuries: Madame de Lafayette, Marivaux, Prévost, Rousseau, Diderot, Laclos, Sade. One course. *Stewart*

153. The French Enlightenment. (AL, FL) Religion, politics, and philosophic and literary ideas of eighteenth-century France: Montesquieu, Voltaire, Rousseau, and others. C-L: Comparative Area Studies. One course. *Stewart*

154S. Upheavals That Made Modern France. (CZ, FL) See C-L: History 154B. One course. *Orr and Reddy*

155. Insiders and Outsiders of Nineteenth-Century France. (AL, FL) How France consolidated its social, literary, and cultural identity after the Revolution. Topics include peasants, the new bourgeois wealth, the emerging power of the "people," expansion to the New World and Africa, and sexual and gender definitions. Works by Chateaubriand, de Duras, Balzac, Hugo, and memoirs edited by Foucault. One course. *Orr*

156. The Age of the Novel. (AL, FL) Flaubert, Balzac, and Stendhal. One course. *Bell or Orr*

159. Topics in Sexuality and Gender Studies. (AL, FL) The study of differences redefined and questioned in terms of sexuality and social identities. Works may be by women or men writers, critics, sociologists, and thinkers from France and Francophone countries and include different historical periods. C-L: Women's Studies. One course. *Staff*

162. French Drama of the Twentieth Century. (AL, FL) A survey of literature for the stage from 1890 to the present. One play each of Claudel, Maeterlinck, Jarry, Giraudoux, Cocteau, Ghelderode, Anouilh, Montherlant, Sartre, Camus, Genet, Ionesco, Beckett, Pinget, Vian, and Arrabal. C-L: Drama 172. One course. *Tufts*

164. French Cinema. (AL, FL) Historical overview of French cinema from the beginning of the sound period (1930). Films by directors such as Clair, Renoir, Carné, Godard, Truffaut, and Varda. Readings in the theory of cinema by French theorists. One course. *Bell*

165. French Existentialism. (CZ, FL) A critical introduction to the chief positions and controversies of French existentialism. One course. *Mudimbe*

166, 167. Contemporary French Life and Thought. (AL, FL) Major writers of the twentieth century and their historical and cultural circumstances. 166: Proust, Gide and the *Nouvelle revue française*, Colette, Alain-Fournier, Mauriac and the generation of 1914; the social novel of the 1930s. 167: existentialism and *Les Temps Modernes*, the New Novel, the writer-critics, recent trends. C-L: Comparative Area Studies and Women's Studies. One course each. *Kaplan*

169. The Contemporary Novel in French Canada. (AL, FL) Major trends in the novel since World War II: social revolt, proletarianism, political and religious liberation, and rejection of the past. C-L: Canadian Studies and Comparative Area Studies. One course. *Keineg*

191, 192. Independent Study. Directed reading and research. Open only to qualified juniors by consent of instructor and director of undergraduate studies. One course each. *Staff*

193, 194. Independent Study. Directed reading and research. Open only to qualified seniors by consent of instructor and director of undergraduate studies. One course each. *Staff*

195. Topics in French Literature and Culture. (AL, FL) Topics to be announced. Offered only in the Duke in France Program. One course. *Staff*

200S. Seminar in French Literature. (AL, FL) Topics to be announced. One course. *Staff*

210. The Structure of French. (FL) Modern French phonology, morphology, and syntax. Readings in current linguistic theory. C-L: Linguistics. One course. *Thomas*

211. History of the French Language. (FL) The evolution of French from Latin to its present form; internal developments and external influences. C-L: Linguistics and Medieval and Renaissance Studies. One course. *Thomas*

240. Medieval Narrative. (AL, FL) The language, literature, and culture of premodern France. Topics involve: literacy, fictionality, allegory. Major writers include Chrétien de Troyes, Guillaume de Machaut, Christine de Pizan, Alain Chartier. C-L: Medieval and Renaissance Studies. One course. *Solterer*

256. Modern Literature and History. (AL, CZ) The interaction of history and literature in a particular period, for example: the occupation of France, the French Revolution. Problems of interpretation, historical memory, social identity, and narrative. C-L: Comparative Area Studies and History 256. One course. *Kaplan, Orr, or staff*

258. The Narrative of Social Crisis. (AL, FL) Realism and naturalism, with special emphasis on Balzac, Flaubert, and Zola. One course. *Bell, Jameson, or Orr*

261. French Symbolism. (AL, FL) Poetry and theories of Baudelaire, Mallarmé, and Rimbaud. Decadence: Lautréamont and Laforgue. One course. *Thomas*

264. Contemporary French Poetry. (AL, FL) The language of poetry. A chronological and theoretical approach to the major poets and movements since 1950. Selections from Bonnefoy, Char, Daive, Deguy, Dupin, Jabès, Jaccottet, Faye, Guillevic, Michaux, Meschonnic, Noël, Oulipo, Ponge, Stefan, Tortel, and others. One course. *Orr or Thomas*

265. French Literature of the Early Twentieth Century. (AL, FL) Emphasis on Gide, Mauriac, Proust, and Colette. One course. *Kaplan*

266. French Literature of the Mid-Twentieth Century. (AL, FL) Emphasis on Malraux, Sartre, Camus, and the *nouveau roman*. One course. *Jameson*

267. Writers, Artists, and Intellectuals in Twentieth-Century France. (AL, FL) Interdisciplinary focus on one figure or one closely connected group of people (writers, artists, filmmakers, intellectuals, and so on); their works studied in their historical and cultural context. One course. *Moi*

Courses Currently Unscheduled

108S. French Women: Myths, Realities, and the Law. (CZ, FL)

112S. Special Topics in Advanced Language. (FL)

131S. French in the New World. (FL, SS)

136S. Life in Eighteenth-Century France. (CZ, FL)

151. French Comedy. (AL, FL)

157. Difference and Representation. (AL, FL)

158. Toward Modernism in French Poetry. (AL, FL)

163. World War II and French Film. (CZ, FL)

168. Francophone Literature. (AL, FL)

170. Contemporary Culture Wars. (CZ, FL)

223. Semiotics for Literature. (AL)

257. Problems of Identity in the Nineteenth-Century Novel. (AL, FL)

263. Contemporary French Theater. (AL, FL)

- 281. Paradigms of Modern Thought. (AL)**
290S. Studies in a Contemporary Figure. (AL, FL)

ITALIAN (IT)

1-2. Elementary Italian. (FL) Understanding, speaking, reading, and writing Italian. Language laboratory available for recording-listening practice. Two courses. *Staff*

20. Intensive Study of Italian. (FL) For beginners or intermediate students. Practice in understanding, speaking, reading, and writing. Emphasis on spoken and written language patterns used in everyday life in Italy. Offered through the Intercollegiate Classical Studies Program in Rome. Placement test administered to returning students intending to continue Italian language studies. One course. *Staff*

21. Accelerated Elementary Italian. (FL) Basic grammar structures in one semester; emphasis on oral work. Prerequisite: four semesters or the equivalent of another foreign language or consent of instructor. One course. *Staff*

22. Accelerated Intermediate Italian. (FL) Readings in modern literature; analysis and discussion. Prepares students to enroll in courses at the 100 level. Prerequisite: Italian 21 or consent of instructor. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

63. Intermediate Italian. (FL) Grammar review, reading, oral practice including laboratory experience. One course. *Staff*

76. Advanced Intermediate Italian. (FL) Oral practice, reading, and composition. Prerequisite: Italian 63 or achievement or placement test score of 550-590. One course. *Staff*

101, 102. Introduction to Italian Literature. (AL, FL) Major writers of the Italian literary tradition. Selections and complete works of poetry, fiction, theater, and essay. 101: Middle Ages to the seventeenth century. 102: eighteenth, nineteenth, and twentieth centuries. Lectures and discussions; short essays and tests. Conducted in Italian. 101 cross-listed with Medieval and Renaissance Studies. One course each. *Caserta or Finucci*

105. Italian Women Writers. (AL, FL) Representative works by women from the Middle Ages to the modern period. Caterina da Siena, Colonna, Stampa, Aleramo, Deledda, Morante, and others. C-L: Comparative Area Studies and Women's Studies. One course. *Finucci*

107. Italian Short Fiction. (AL, FL) Novellas and short stories from the Middle Ages to the present. One course. *Finucci*

110. Advanced Readings and Composition. (AL, FL) Practice in writing. The refinement of written and oral expressions through the analysis of literary texts. One course. *Finucci*

111S. Special Topics in Advanced Language. (FL) Intensive instruction in Italian using newspapers, short stories, and films in order to enhance oral fluency. One course. *Caserta*

118S. Italian Literature and Popular Culture. (AL, FL) The formation of Italian popular culture in different historical periods. Emphasis to vary; attention paid to serial novels, detective fiction, films, prints, paintings, and popular music. May include older forms of popular culture such as the romances of chivalry, the "commedia dell'arte," carnivals, and melodrama. One course. *Finucci or staff*

122. Topics in Italian Literature in Translation. (AL) Single authors, genres, movements, or themes. Topics to be announced. One course. *Finucci*

123. Aspects of Italian Literature. (AL) Concentration on single authors, periods, genres, regions, or themes. Topics to be announced. Offered only in the summer program in Florence, Italy. Taught in English. One course. *Finucci*

125. Aspects of Renaissance Culture. (CZ) Taught in English. See C-L: Medieval and Renaissance Studies 115; also C-L: Art History 149 and History 148. One course. *Rasmussen, Rice, Van Miegroet, and Witt*

131. Topics in Italian Civilization. (CZ, FL) The institutions and culture of Italy throughout the centuries. Topics to be announced. C-L: Comparative Area Studies. One course. *Finucci*

139. Modern Italy. (CZ, FL) Political, social, economic, and cultural problems in Italian history from 1861 to the present. One course. *Caserta*

141S, 142S. Italian Literature. (AL, FL) Topics to be announced. Open to juniors and seniors. One course each. *Staff*

145S. Topics in Renaissance Literature and Culture. (AL, FL) Topics may include: epic, women writers, treatises, Petrarchism, theater. C-L: Medieval and Renaissance Studies. One course. *Finucci*

151S. The Italian Theater. (AL, FL) Introduction to the Italian theatrical tradition. Content varies; six to eight plays from the Renaissance to the present. C-L: Drama 175S. One course. *Finucci*

155S. Nineteenth-Century Italian Literature. (AL, FL) An historical and aesthetic appreciation of principal works of selected major Italian writers of the nineteenth century. C-L: Comparative Area Studies. One course. *Caserta*

159S. Topics in Sexuality and Gender Studies. (AL, FL) The study of identity and difference and the representation of bodies, genders, and desires in mainstream and popular Italian literature. May include different historical periods. Readings from classical and contemporary works, memoirs, letters, diaries, medical treatises, pamphlets. C-L: Study of Sexualities and Women's Studies. One course. *Finucci or staff*

170S. Film and the Italian Novel. (AL, FL) Novels and classical narrative cinema. Topics such as novels and their cinematic versions, war, women's fiction and the woman's picture, and neorealism in novel and film. C-L: Comparative Area Studies and Film and Video. One course. *Finucci*

191, 192. Independent Study. Directed reading and research. Open only to qualified juniors by consent of instructor and director of undergraduate studies. One course each. *Staff*

193, 194. Independent Study. Directed reading and research. Open only to qualified seniors by consent of instructor and director of undergraduate studies. One course each. *Staff*

283. Italian Novel of the Novecento. (AL, FL) Representative novelists from Svevo to the most recent writers. One course. *Caserta*

284, 285. Dante. (AL, FL) 284: *La Vita Nuova* and a close reading of the *Inferno*. 285: the *Purgatorio* and the *Paradiso* in the light of Dante's cultural world. Special attention will be given to the poetic significance of the *Commedia*. Reading in Italian or English. Prerequisite: for 285, Italian 284 or equivalent. C-L: Medieval and Renaissance Studies. One course each. *Caserta*

PORTUGUESE (PTG)

1-2. Elementary Portuguese. (FL) The essential elements of Portuguese structure and vocabulary and aspects of Lusophone culture. Oral comprehension, speaking, reading, and writing. Work in the language learning center required. Two courses. *Damasceno*

21. Accelerated Elementary Portuguese. (FL) Basic grammar structures in one semester; emphasis on oral work. Prerequisite: four semesters of another foreign language or consent of instructor. One course. *Damasceno*

22. Accelerated Intermediate Portuguese. (FL) Introduction to aspects of Luso-Brazilian culture based on readings, films, and music. Review of basic grammar, emphasis on class reports and participation, several essays required. Prepares students to enroll in courses at the 100 level. Prerequisite: Portuguese 21 or consent of instructor. One course. *Damasceno*

111S. Research Seminar in Contemporary Lusophone Issues. (FL) A research seminar that allows students to practice advanced language skills and develop individual research projects on contemporary issues in the Portuguese-speaking world with an interdisciplinary focus. Prerequisite: Portuguese 22 or equivalent. One course. *Damasceno*

191, 192, 193, 194. Independent Study. One course each. *Staff*

200S. Seminar in Portuguese Literature. (AL, FL) Topics to be announced. One course. *Damasceno*

202S. Topics in Portuguese and Brazilian Literature and Culture. (AL, FL) Exploration of topics of cultural formation in the Lusophone world that emphasize autochthonous cultural theory. Examples of semester topics: Brazilian cultural theory: modernism to post-modernism; Brazilian popular culture; Portugal post-Salazar. A graduate level course open to juniors and seniors with background in cultural theory. Level of Portuguese required varies with semester topic; consult instructor. One course. *Damasceno*

SPANISH (SP)

1-2. Elementary Spanish. (FL) Understanding, speaking, reading, and writing Spanish. Language laboratory available for recording-listening practice. Two courses. *Staff*

12. Review of Elementary Spanish. (FL) Intensive review of first-year Spanish. Open only to students with a placement or achievement score of 430-490. May not be taken for credit by students who have taken 1-2. One course. *Staff*

14. Intensive Study of Spanish. (FL) Covers the entire program of elementary Spanish study in one semester using a media-based approach. Primary focus on oral skill development, with additional work on reading and writing. Two courses. *Staff*

15. Intensive Spanish. (FL) Covers the entire program of intermediate language study in one semester using a media-based approach. Continued emphasis on oral skill development and the introduction of progressively longer and more challenging reading and writing activities. Prerequisite: Spanish 14 or the equivalent. Two courses. *Staff*

21. Accelerated Elementary Spanish. (FL) Basic grammar structures in one semester; emphasis on oral work. Prerequisite: four semesters or the equivalent of another foreign language or consent of instructor. One course. *Staff*

22. Accelerated Intermediate Spanish. (FL) Review of basic grammar; emphasis on reading, with some practice in writing. Prepares students to enroll in courses at the 100 level. Prerequisite: Spanish 21 or consent of instructor. One course. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

62. Intensive Study of Spanish. (CZ, FL) Practice in understanding, speaking, and reading; emphasis on spoken language patterns used in everyday life in Costa Rica, with special attention to cultural and environmental topics and issues. Offered only at the Duke/Organization of Tropical Studies Undergraduate Program in Las Cruces, Costa Rica. Prerequisite: Spanish 1-2, Spanish 12, or equivalent. One course. *Staff*

63. Intermediate Spanish. (FL) Grammar review, reading, and oral practice, including laboratory experience. Prerequisite: Spanish 2, 12, or achievement or placement test score of 500-570. One course. *Staff*

70, 71. Introduction to Literature. (FL) One or two course credits for Advanced Placement in literature. One course each.

76. Advanced Intermediate Spanish. (FL) Oral practice, reading, composition. Prerequisite: Spanish 63 or achievement or placement test score of 580-620. One course. *Staff*

101. Advanced Composition and Conversation. (FL) The refinement of written and oral expression through the analysis of literary texts. Continued development of vocabulary and the study of grammar in context. One course. *Staff*

104S. Spanish Language: Peninsular or American. (FL) Topics to be announced. One course. *Staff*

107S. Advanced Grammar. (FL) A systematic study of modern Spanish morphology and syntax. Offered only in Madrid and in Bolivia. One course. *Staff*

108S. Advanced Colloquial Spanish. (FL) Colloquial Spanish as a catalyst of popular culture; extensive comparisons of English and Spanish popular sayings and proverbs; emphasis on oral communication. Prerequisite: two Spanish courses at the 100 level. One course. *Garci-Gómez*

109S. Structure of Spanish. (FL) A systematic study of modern Spanish morphology and syntax with some readings in current linguistic theory. Prerequisite: Spanish 101. C-L: Linguistics. One course. *Staff*

110S. Introduction to Literary Analysis. (AL, FL) Different genres, including narrative, poetry, drama, essay, film, and song. Texts will be drawn from different periods of Spanish and Spanish-American literature. One course. *Staff*

111, 112. Introduction to Spanish Literature. (AL, FL) Major writers of the Spanish literary tradition. Poetry, fiction, theater, and essay. 111: Middle Ages through the seventeenth century. 112: eighteenth, nineteenth, and twentieth centuries. One course each. *Garci-Gómez, Osuna, or staff*

113S, 114S. Discussion of Readings. (AL, FL) Selected topics. Open only to freshmen and sophomores. Prerequisite: Spanish 76 or placement/achievement score of 630+. One course each. *Staff*

115, 116. Introduction to Spanish-American Literature. (AL, FL) A survey of major writers and movements from the period of discovery to the present day. 115: the periods of conquest, colonial rule, and early independence. Includes works by native Indian, *mestizo*, and women writers. 116: from *modernismo* to the contemporary period. C-L: Comparative Area Studies. One course each. *Staff*

117A, S. Spanish-American Short Fiction. (AL, FL) Novellas and short stories of the nineteenth and twentieth centuries: Martí, Darío, Quiroga, Borges, Cortázar, García Márquez, Allende, Ferré, Carpentier, and others. One course. *Pérez Firmat or staff*

117B, S. Bolivian Contemporary Short Fiction. (AL, FL) Introduction to Bolivian and Latin American short fiction. The relationship between contemporary short fiction and the concept of "magical realism." The influence of Borges, Cortázar, García Márquez, Carpentier, as well as the influence of popular folk tale, legend, and myth on contemporary Bolivian fiction writers. (Taught in Bolivia.) One course. *Staff*

120S. Contemporary European Issues. (CZ) An interdisciplinary seminar addressing topics of European culture. Taught in English and Spanish. Offered only in the Duke in Madrid program. Consent of instructor required. C-L: Cultural Anthropology 182S. One course. *Staff*

121. Latin-American Literature in Translation. (AL) Fictional and poetic works of the last thirty years that have made an impact on world literature. Taught in English. C-L: Comparative Area Studies. One course. *Dorfman*

122S. Topics in Spanish and/or Latin-American Literatures and Cultures. (AL, CZ) A cultural critique focusing on specific themes to be announced. Topics may include: cultural differences; relations between languages and literatures; national minorities and multiculturalism; postcolonialism; minor literatures; globalization. Taught in English. One course. *Staff*

124. Special Topics in Latin American Studies. (AL, CZ) For juniors and seniors. Taught in English. See C-L: Latin American Studies 198. One course. *Staff*

131. Topics of Hispanic Civilization. (CZ, FL) A humanistic study of Spain or Spanish America through history, culture, people, and institutions. Topics may vary each semester. C-L: Comparative Area Studies. One course. *Staff*

137. Aspects of Contemporary Spanish Culture. (CZ, FL) Offered only as part of the summer program in Spain. C-L: Comparative Area Studies. One course. *Garci-Gómez*

138S. The Spanish Civil War in History and Literature. (AL, FL) An examination of the Spanish Civil War of 1936-39 through literary and historical readings, and through its representation in art, music, and film. One course. *Sieburth*

140A, S. The Articulation of Culture in the Bolivian Andes. (FL, SS) Focus on the media and the public sphere, on capitalization and cultural politics, on plurilinguism and multilingualism, and on globalization, ecology, and identities in present day Bolivia and the Andes. (Taught in Bolivia.) C-L: Cultural Anthropology 199A. One course. *Staff*

140B, S. Colonialism, Ethnicity, and Gender in Postrevolutionary Bolivia. (CZ, FL) (Taught in Bolivia.) See C-L: Sociology 188B; also C-L: Cultural Anthropology 199E and Women's Studies. One course. *Staff*

140C, S. Bolivian Literature Since the Reemergence of Democracy (1982-1995). (AL, FL) The Bolivian literary production after the long period of authoritarian regimes (1964-1982). How narrators and poets have responded aesthetically to the social and political changes. (Taught in Bolivia.) One course. *Staff*

140E, S. Cultural Diversity in the Andes. (CZ, FL) Social, political, and cultural issues of the indigenous Aymara population in present-day Bolivia. Focus on the educated Aymara elite and their struggle to attain recognition in a multicultural society deeply divided along racial and ethnic lines. (Taught in Bolivia.) C-L: Comparative Area Studies and Cultural Anthropology 140S. One course. *Staff*

140F. Film and Political Culture in Contemporary Bolivia. (AL, FL) Focus on films and mass media used to appeal to the dispossessed and marginal sectors of society. (Taught in Bolivia.) One course. *Sanjines*

141S, 142S. Spanish Literature. (AL, FL) Topics to be announced. Open to juniors and seniors. One course each. *Staff*

143S. Literature of the Discovery and Conquest of America. (AL, FL) Prose and poetry from the sixteenth through eighteenth centuries, exploring the idea of the New World from conquest to independence. C-L: Comparative Area Studies. One course. *Staff*

144S. Spanish-American Literature of Identity. (AL, FL) Exploration of the concepts of *lo criollo* or *lo americano*, essentially through the analysis of texts by Arriví, Carpentier, Neruda, Paz, and others. C-L: Comparative Area Studies. One course. *Pérez Firmat*

145S. Literature of the Hispanic Minorities of the United States. (AL, FL) Representative Spanish-language works by Puerto Rican, Cuban-American and Chicano writers. C-L: Comparative Area Studies. One course. *Pérez Firmat*

146. The Spanish-American Novel. (AL, FL) Masterworks of the twentieth century. C-L: Comparative Area Studies. One course. *Moreiras or staff*

147S. Latin-American Women Writers. (AL, FL) Exploration of common themes across the region, such as family, love, feminism, and violence. May include only contemporary writers or cover authors from earlier periods as well. May study Brazilian writers in Spanish or in English translation. May concentrate on narrative or include poetry and drama. Open only to juniors and seniors. C-L: Comparative Area Studies and Women's Studies. One course. *Staff*

148. Colonial and Postcolonial Studies in Latin America and the Caribbean. (CZ, FL) Focus on Western colonial expansion since the sixteenth century and on the national periods, following the movement of independence. Cultural differences of colonial and postcolonial experiences; transition from colonial to postcolonial regimes. Languages and literatures, history of ideas, cartography, and the social imaginary expressed in everyday life, from architecture to clothing, from rules of social behavior to ecological consciousness. Limited to juniors and seniors. One course. *Mignolo*

151. Spanish Literature of the Renaissance and the Baroque. (AL, FL) Selected works of the sixteenth and seventeenth centuries with attention to their reflection of social, religious, and political ideas. C-L: Medieval and Renaissance Studies. One course. *Staff*

153. Golden Age Literature: Cervantes. (AL, FL) Emphasis on the *Quijote*. C-L: Medieval and Renaissance Studies. One course. *Staff*

169. Topics in Nineteenth- and Twentieth-Century Spanish Literature. (AL, FL) Focus on a specific genre or theme to be announced. One course. *Sieburth or Vilarós*

171. Literature of Contemporary Spain. (AL, FL) A cultural critique of contemporary Spain (1936 to present) through different literary genres (novel, theater, poetry). Authors include Celaya, Otero, Arrabal, Rodoreda, Goytisolo, and Martín-Gaité. C-L: Comparative Area Studies. One course. *Vilarós*

175S. Hispanic Literature and Popular Culture. (AL, FL) Works of Spanish and Latin American fiction that parody or rewrite popular culture genres such as serial novels, detective stories, or Hollywood films. Authors include Cervantes, Galdós, Borges, Marsé, and Puig. One course. *Sieburth*

177S. Women Writers of Spain. (AL, FL) Prominent Spanish women writers through literary history, from María de Zayas and Santa Teresa de Avila (XVI Century) to Carmen Martín Gaité or Almudena Grandes (contemporary). Fictional writing, films, essays, and other pertinent texts. Catalan and Galician authors, such as Mercè Rodoreda or Rosalía de Castro (as well as Basque authors when translations are available); Castilian-Spanish

writers. Questions of gender identity will be particularly important for this course. One course. *Staff*

191, 192. Independent Study. Directed reading and research. Open only to qualified juniors by consent of instructor and director of undergraduate studies. One course each. *Staff*

193, 194. Independent Study. Directed reading and research. Open only to qualified seniors by consent of instructor and director of undergraduate studies. One course each. *Staff*

195. Topics in Spanish Literature and Culture. (AL, FL) Topics to be announced. Offered only in the Duke in Madrid Program. One course. *Staff*

200S. Seminar in Spanish Literature. (AL, FL) Topics to be announced. One course. *Staff*

210. History of the Spanish Language. (FL) Formation and development. Internal forces and external contributions. C-L: Comparative Area Studies, Linguistics, and Medieval and Renaissance Studies. One course. *Garci-Gómez*

244. Topics in Twentieth-Century Latin-American Fiction. (AL, FL) Study of various critical problems in the narrative of the area. Focus on one or more major issues, such as the representation of violence, magical realism, *indigenismo*, *novela de la tierra*. Prerequisite: Spanish 106. One course. *Moreiras*

245. Latin-American Poetry. (AL, FL) Focus on major movements and authors. Non-mainstream poetical traditions, such as poetry written in Quechua, oral poetry. Prerequisite: Spanish 106. C-L: Comparative Area Studies. One course. *Moreiras or staff*

246. Textual Politics in Nineteenth-Century Spanish-American Literature. (AL, FL) The political uses of writing by different social actors. Topics may include ethnic and sexual identities, popular and educated traditions, scientific fictions, modernization, and the role of the writer. One course. *Nouzeilles*

248. Studies in Spanish-American Literature. (AL, FL) Concentration on single authors, genres, movements, or themes. One course. *Staff*

250. Latin-American Film. (AL, FL) Study of Latin-American film through selected films and critical texts. Attention paid to contemporary production given availability, such as the work of Raúl Ruiz, Miguel Littin, Eliseo Subiela. One course. *Moreiras and staff*

251S. Spanish Film. (AL, FL) Cultural critique of Spanish film history. Topics range from the study of the production of a Spanish national identity within a changing global context to the study of a particular movement (for example, Nuevo cine de mujeres), period (for example, Civil War), or author (for example, Luis Buñuel or Pedro Almodóvar), to a critical survey of Spanish film from the 1920s to the present. One course. *Vilarós*

275. Modern Spanish Poetry. (AL, FL) Juan Ramón Jiménez, Unamuno, Antonio Machado, the Generation of 1927, and the contemporary poets. One course. *Osuna*

Courses Currently Unscheduled

133S. Spanish-American Civilization. (CZ, FL)

163. The Generation of 1898. (AL, FL)

165S. Major Spanish Authors. (AL, FL)

166. Nineteenth-Century Prose Fiction. (AL, FL)

176S. Disenchanted Texts: Spanish Literature 1975-1990. (AL, FL)

262. The Romantic Movement. (AL, FL)

276. Modern Spanish Drama. (AL, FL)

277. Modern Spanish Novel. (AL, FL)

ROMANCE STUDIES (RS)

124. Modernity, Ethnicity, and Colonization. (AL, CZ) Cultural issues related to Spanish, Portuguese, and French colonial expansion in the New World. Topics such as languages and ethnicity; cultural literacy in colonial and multilingual situations; education and the state; civilization and modernity; postcoloniality and postmodernity. Taught in English; readings in Spanish and/or Portuguese and/or French, according to the particular topic of the semester. C-L: African and African-American Studies 123, Canadian Studies, Comparative Area Studies, and Cultural Anthropology 130. One course. *Mignolo or staff*

125. Introduction to North America. (CZ, SS) See C-L: North American Studies 110; also C-L: Cultural Anthropology 129, Economics 115, History 108F, Political Science 119, Public Policy Studies 115, and Sociology 109. One course. *Shanahan*

210S. Topics in Linguistics. (SS) One course. *Staff*

283S. Seminar in North American Studies. (CZ) See C-L: North American Studies 283S; also C-L: Cultural Anthropology 283S, History 283S, Political Science 285S, Public Policy Studies 282S, and Sociology 283S. One course. *Staff*

Courses Currently Unscheduled

218. The Teaching of Romance Languages

INDIGENOUS LANGUAGES

Aymara (AYM)

21. Beginning Aymara. (FL) Introduction through immersion to the history and structure of Aymara. (Taught in the Duke in the Andes Program only.) One course. *Staff*

63. Intermediate Aymara. (FL) Grammar review, reading, and oral practice. Review of the history of Aymara/Spanish contact. (Taught in the Duke in the Andes Program only.) One course. *Staff*

76. Advanced Aymara. (FL) Oral practice, writing exercises, and advanced grammar. Further studies of Aymara/Spanish contact in the current Bolivia and the Andes. (Taught in the Duke in the Andes Program.) One course. *Staff*

Quéchua (QCH)

21. Beginning Quéchua. (FL) Introduction through immersion to the history and structure of Quéchua. (Taught in the Duke in the Andes Program only.) One course. *Staff*

63. Intermediate Quéchua. (FL) Grammar review, reading, and oral practice. Review of the history of Quéchua/Spanish contact. (Taught in the Duke in the Andes Program only.) One course. *Staff*

76. Advanced Quéchua. (FL) Oral practice, writing exercises, and advanced grammar. Further studies of Quéchua/Spanish contact in the current Bolivia and the Andes. (Taught in the Duke in the Andes Program.) One course. *Staff*

THE MAJOR

Majors are offered in French Studies, Italian and European Studies, and Spanish. The French Studies and Spanish majors offer several different tracks, as described below.

Prerequisite. French, Italian, or Spanish 22, 76, or equivalents.

French Studies Major Requirements. The French Studies major offers two tracks: (1) French Studies and (2) French and European Studies.

Prerequisites: French 100 or equivalent (grade of A- or above in French 22 or 76, Advanced Placement literature score of 5, achievement test score of 620, or placement test score of 600 or above, or comparable linguistic experience).

(1) *French Studies:* A total of ten courses at the 100 level and above, eight of which must be from departmental offerings taught in French. These eight core courses must include two survey courses (either 101 or 105, and either 102 or 106), and at least three courses at the 140 level or above. The two remaining courses must be on French-related topics and may be taken either in the department or in other departments (consult the undergraduate major advisor concerning approved related courses).

(2) *French and European Studies:* An interdisciplinary track requiring a total of ten courses at the 100 level or above, seven of which must be from departmental offerings taught in French. Of these seven core courses at least three must be at the 140 level or above. Three courses on any European-related topic at the 100 level or above must be taken in other departments. Proficiency in another European language is highly desirable (consult the undergraduate major advisor concerning approved related courses).

Italian and European Studies Major Requirements: An interdisciplinary track requiring a total of ten courses at the 100 level or above. Five Italian courses must be taken, at least two of which must be at the 140 level or above. Five courses on any Europe-related topic at or above the 100 level must be taken in other departments (consult the undergraduate major advisor concerning approved related courses).

Spanish Major Requirements. The Spanish major offers three tracks: (1) Spanish Studies, (2) Spanish and Latin American Studies, and (3) Spanish and European Studies.

(1) *Spanish Studies:* A total of ten courses at the 100 level and above, eight of which must be from departmental offerings taught in Spanish. These eight core courses must include any two of the survey sequences (111, 112, 115, 116) and at least three courses at the 140 level or above. The two remaining courses must be on Peninsular or Latin America-related topics and may be taken either in the department or in other departments (consult the undergraduate major advisor concerning approved related courses).

(2) *Spanish and Latin-American Studies:* An interdisciplinary track requiring a total of ten courses at the 100 level and above, seven of which must be from departmental offerings taught in Spanish. These seven core courses must include one survey course on Latin American literature (115 or 116), and at least three courses at the 140 level or above, two of which must be on Latin American topics. Three courses on Latin American topics at or above the 100 level must be taken in other departments. A Brazilian literature course at or above the 100 level offered by the department may be substituted for one of these three courses. Proficiency in Portuguese is highly desirable (consult the undergraduate major advisor concerning approved related courses).

(3) *Spanish and European Studies:* An interdisciplinary track requiring a total of ten courses, seven of which must be from departmental offerings taught in Spanish. These seven core courses must include one survey course on Peninsular topics (111 or 112) and at least three courses at the 140 level or above, two of which must be on Peninsular topics. Three courses on an European-related topic at or above the 100 level must be taken in other departments. Proficiency in another European language is highly desirable (consult the undergraduate major advisor concerning approved related courses).

Courses numbered 120 through 129 are taught in English and do not count toward the major (French and Spanish only). Course numbers 181 and 182 (now renumbered as 21, 22) do not count toward the major (French, Spanish, and Italian).

Study Abroad. Students are strongly urged to study abroad since this is the best way to achieve language proficiency and to acquire knowledge of a country's culture. A maximum of two courses per semester, or one per summer, may be counted toward the seven or eight core courses required in any of the major tracks. (The summer course restriction does not apply to Duke-administered programs.)

Suggested Work in Related Disciplines. In order to give perspective to a student's program, majors in French or Spanish will normally select, with the approval of the major advisor, appropriate courses from such fields as: (1) other languages and literatures; (2) history and cultural anthropology; (3) philosophy; (4) music and art; and (5) linguistics.

THE MINOR

Minors are offered in French Studies, Italian Studies, and Spanish.

French Studies

Requirements. A total of five courses from departmental French offerings numbered 100 or above and taught in French. These must include one survey course (101, 102, 105, or 106) and at least two courses numbered at the 140 level or above.

Italian Studies

Requirements. A total of five courses from departmental Italian offerings numbered 100 or above. These must include at least one course numbered at the 140 level or above. Four (4) of the five (5) courses must be taught in Italian.

Spanish

Requirements. A total of five courses from departmental Spanish offerings numbered 100 or above. These must include one survey course (111, 112, 115, or 116) and at least two courses at the 140 level or above. All five courses must be taught in Spanish.

Russian

For courses in Russian, see Slavic Languages and Literatures.

Science, Technology, and Human Values Program (STH)

Professor Vesilind, *Director*

A certificate, but not a major, is available in this program.

The Program in Science, Technology, and Human Values offers students the opportunity to develop a comprehensive view of science, medicine, or technology in social, historical, and ethical terms. Although a major is not available in this program, the course of study will enrich the understanding of one's future profession.

COURSE OF STUDY

Duke courses pertinent to the program are classified according to their approach: ethical, analytical (historical, philosophical, or sociological), or policy-centered. Each student entering the program selects a program of five courses (four for engineering majors) covering all three approaches. Individual programs, selected from more than ninety courses, are tailored to each student's interests. Students in the program focus their course work and individual interests through an interdisciplinary seminar offered in the senior year (Science, Technology, and Human Values 108S). A seminar consisting of six varied topics in science, technology, and the humanities is offered as a course for undergraduates (Science, Technology, and Human Values 112S, 113S). Full details concerning the program and courses in science, technology, and human values may be obtained by writing or calling the director.

108S. Professional Ethics. (SS) Case study approach used to introduce professional ethics. Topics include moral development, confidentiality, risk and safety, social responsibility, fraud and malpractice, legal aspects of professionalism, and environmental ethics. The

capstone course for students completing the certificate in the Program in Science, Technology, and Human Values. C-L: Engineering 108S. One course. *Vesilind*

112S, 113S. Special Topics in Science, Technology, and Human Values. Six four-week segments offered sequentially over the fall and spring semesters by faculty of the Program in Science, Technology, and Human Values. Credit for 112S or 113S is awarded for completion of three to five segments within a single academic year; credit for 112S and 113S for completion of six segments. Only students who take three segments in the fall semester should register for 112S; those who take no more than two segments in the fall and one or more segments in the spring semester should register instead for 113S in the spring. One course each. *Vesilind and staff*

ELIGIBILITY AND CERTIFICATION

Students may apply to the program at any time. To students who complete the program, Duke University gives official recognition of their participation.

Study of Sexualities (SXL)

Professor Younger, *Director*

A certificate, but not a major, is available in this program.

The Program in the Study of Sexualities offers an interdisciplinary course of study that introduces students to critical analyses of the various expressions of sexuality in societies around the world, both past and present. Such expressions encompass a wide range from heterosexuality to homosexuality, and include other erotic desires, sexual relationships, and gender roles. Critical analyses concern how sexuality is formed, defined, and regulated by biological and social forces.

Courses in this area are sponsored by the program, offered through several different academic departments and programs, and taught by many faculty members. Students working toward a certificate in the Study of Sexualities will declare a major in an academic department. To qualify for the certificate, students take either Cultural Anthropology 108 or Sociology 149, and four additional courses at or above the 100 level, one of which may be a special seminar designed mainly for participants in the program. Appropriate courses may come from the list given below or may include other courses (new courses, special topics courses, and independent study) as approved by the director. Regular courses are described under the listings of the various departments. Students may also wish to take advantage of house courses offered on topics in this area although house courses cannot satisfy the requirements of the program.

STUDY OF SEXUALITIES COURSE, REGULARLY SCHEDULED

115D. Perspectives in Gay, Lesbian, and Bisexual Studies. (CZ) Topics include homosexuality and history, religion, law, education, the arts and literature, the military, and the health sciences. C-L: English 101D. One course. *Younger*

OTHER REGULARLY SCHEDULED COURSES

Introductory Courses

Cultural Anthropology 103. Sexuality and Culture in America. *Luttrell*
Sociology 149. Sexuality and Society. *Tiryakian*

Biological Anthropology and Anatomy

146. Sociobiology. *Van Schaik*

Cultural Anthropology

113. Gender and Culture. *Allison, Luttrell, Quinn, or Silverblatt.*
142. Sexuality in Global Perspective. *Luttrell*
216S. Gender, Race, and Class. *Luttrell*

English

184. Literature and Sexualities. *Clum, Goldberg or Moon*

History

209S. Race, Class, and Gender in Modern British History. *Thorne*

Italian

159S. Topics in Sexuality and Gender Studies. *Finucci or staff*

Psychology

177S. Human Sexuality. *Staff*

Religion

125. Women and Sexuality in the Christian Tradition. *Clark*

SPECIAL TOPICS COURSES, OFFERED PERIODICALLY**Asian and African Languages and Literature**

203S. Gender and War. *Cooke*

Biology

296S. Sex and the Brain. *Einstein*

Cultural Anthropology

112. Gender and Languages. *Andrews*

280S. Gender Learning and Teaching. *Luttrell*

Classical Studies

195.01S. Gender and Sexuality in Ancient Greece. *Younger*

195.02S. Gender and Sexuality in Ancient Rome. *Janan*

English

288. Gay Abandon. *Moon*

288. Homosexuality-Masculinity in Drama. *Clum*

Psychology

180S. Advanced Topics in the Psychology of Gender. *Fischer, Hamilton, or Roth*

Slavic Languages and Literatures

Research Scholar Mickiewicz, *Acting Chair*; Associate Professor Andrews, *Director of Undergraduate Studies*; Associate Professor Lahusen; Assistant Professor Gheith; Associate Professor Emeritus Jezierski; Associate Professor of the Practice Flath; Assistant Professors of the Practice Maksimova and Van Tuyt

A major or minor is available in this department.

The Department of Slavic Languages and Literatures has a strong commitment to increasing the language proficiency of its students in the context of culture acquisition, to helping students develop their own scholarly interests and research abilities, and to acquainting students with trends in literary and linguistic theory. Areas of specialization include nineteenth and twentieth century Russian and Soviet literature, gender studies, film and media, legal and business Russian language, translation, Slavic linguistics, contemporary Russian literature, scientific and scholarly Russian language, stylistics, and history of the Russian literary language. Other Slavic languages occasionally taught include Polish, Ukrainian, Serbian and Croatian.

Resources for study include a state-of-the-art language laboratory with video facilities and a humanities computing facility, reception of daily Russian television programming, and an exchange program with St. Petersburg University. The department offers both semester-long and summer language and culture programs at St. Petersburg University. The department also hosts a Russia-based FOCUS seminar and maintains a cooperative relationship with the Duke Program in Literature, Women's Studies, Cultural Anthropology, and the Center for Slavic, Eurasian and East European Studies, as well as with related programs at the University of North Carolina at Chapel Hill.

RUSSIAN (RUS)

1-2. Elementary Russian. (FL) Introduction to understanding, speaking, reading, and writing. Audiolingual techniques are combined with required recording-listening practice in the language laboratory. Two courses. *Staff*

4, 5. Elementary Russian Conversation. (FL) Introduction to spoken Russian with emphasis on basic conversational style and increasing vocabulary. Half course each. *Staff*

14. Intensive Russian. (FL) Russian 1 and 2 combined in one semester. Two meetings daily, as well as daily computer and language laboratory work. Two courses. *Staff*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

61S, 62S. Intermediate Russian Language and Culture. (CZ, FL) Intensive classroom practice in phonetics, conversation, and grammar. Literature, films, museums, and theater performances. (Taught in St. Petersburg in Russian and English depending on placement.) Prerequisite: Russian 2 or equivalent. One course each. *Staff*

63. Intermediate Russian I. (FL) Intensive classroom and laboratory practice in spoken and written patterns. Reading in contemporary literature. Prerequisites: Russian 1 and 2, or two years of high school Russian. One course. *Staff*

64. Intermediate Russian II. (FL) Intensive classroom and laboratory practice in spoken and written patterns. Reading in contemporary literature. Prerequisites: Russian 1, 2 and 63 or equivalent. One course. *Staff*

66, 67. Intermediate Russian Conversation. (FL) Consolidation of oral skills. Intensive conversation on a broad range of topics. Prerequisites: Russian 1 and 2, or equivalent. Half course each. *Staff*

70. Intensive Intermediate Russian. (FL) Russian 63 and 64 combined. Two meetings daily, as well as daily computer and language laboratory work. Two courses. *Staff*

101S, 102S. Contemporary Russian Composition and Readings. (FL) Advanced grammar and syntax with intense composition component. Analytical readings in the original. Prerequisites: for 101S, Russian 63 and 64, or equivalent; for 102S, Russian 101S. One course each. *Staff*

103S, 104S. Studies in the Russian Language and Culture. (CZ, FL) Analytical readings including grammatical and textual analysis. Additional work in phonetics and conversation. Literature, films, museums, and theater performances. (Taught in St. Petersburg in Russian.) Prerequisite: Russian 64 or equivalent. C-L: Comparative Area Studies. One course each. *Staff*

105, 106. Third-Year Russian Conversation. (FL) Conversation course for students enrolled in Russian 101, 102. Not open to students currently taking Russian 63, 64 or Russian 195, 196. Half course each. *Staff*

107S. Russian Phonetics. (FL) Analysis of contemporary standard Russian literary pronunciation, phonology, and intonational structures. Prerequisite: Russian 64 or consent of instructor. One course. *Staff*

108S. Soviet Civilization: History and Its Mythologies. (AL, CZ) The most significant concepts, events, and personages of Russian and Soviet history through the prism of Soviet and post-Soviet official and popular culture, literatures, the arts, and cinema. Topics include: proletarian dictatorship and woman's liberation, the "Russian Idea" and the "struggle for peace," the October Revolution, and industrialization, Russian Czars, post-Soviet leaders from Ivan the Terrible and Peter the Great to Lenin, Stalin, and Gorbachev. Taught in English. One course. *Dobrenko*

110. Intensive Russian Composition and Readings. (AL, FL) Russian 101S and 102S combined in one course. Two meetings daily, as well as daily language laboratory work. Two courses. *Staff*

111S, 112S. Senior Honors Seminar. Introduction to methods of research and writing, including selection of thesis topics, preliminary research and organization, and writing of the thesis. Consent of the director of undergraduate studies required. One course each. *Staff*

113. Studies in Comparative World Cinema. (AL) See C-L: Literature 113; also C-L: English 122, Film and Video, and German 113. One course. *Staff*

115. Russian Language Studies in St. Petersburg. (FL) Russian grammar and composition taught only in St. Petersburg for students participating in the semester program. One course. *Staff*

119S, 120S. Topics in Slavic and Northern European Languages. (FL, SS) Introduction to a Slavic or Northern European language, including relevant linguistic topics and theories. Open only to students in the FOCUS Program. One course each. *Staff*

121S, 122S. Introduction to Russian Literature. (AL, FL) Major works in Russian literature including prose and poetry. Prerequisite: Russian 63, 64 or equivalent. One course each. *Staff*

129. Russian Orthodoxy. (CZ) The belief systems and the history of the Russian Orthodox Church. The relationship between orthodoxy and Russian secular culture, including the response of several Russian writers. Taught in English. C-L: Religion 126. One course. *Pelech*

130. Soviet Cinema. (AL) History of Soviet film industry from silent to sound period. Overview of major theorist-filmmakers: Eisenstein, Pudovkin, Vertov. Issues of reception, audience, politics, form, national and ethnic identities. Taught in English. C-L: Film and Video. One course. *Gaines, Jameson, and Lahusen*

131. Language, Culture, and Myth: The Slavic Proverb. (AL) The sources of the Slavic proverb, the proverb as microtext of national stereotypes, and its function in modern literature and culture. Problems of translation. Taught in English. C-L: Comparative Area Studies. One course. *Staff*

135. Contemporary Russian Media. (FL, SS) Analytical readings and study of change and development in all the primary forms of mass media in the former Soviet Union from 1985 to present (newspapers, journals, and television). Topics include censorship, TASS, samizdat. Taught in English, readings in Russian. Prerequisite: Russian 64 or equivalent. C-L: Comparative Area Studies. One course. *Andrews*

135A. Contemporary Russian Media. (FL, SS) Same as Russian 135 but taught only in St. Petersburg. Prerequisite: Russian 64 or equivalent. C-L: Comparative Area Studies. One course. *Staff*

145. Theory and Practice of Translation. (FL) Overview of the scholarly literature on translation combined with a program of practical translation exercises. Prerequisite: three years of Russian language study or consent of instructor. One course. *Flath*

149S. Russian Culture in the Era of Terror: A Reexamination. (AL) Readings from various sources, such as recently published diaries and literary works; film; critical and historical material. The "era of the great terror" (1934-39): seen through cultural production, its reception through everyday life narratives and contemporary ideology critique. Taught in English. Also taught as History 195S. C-L: Comparative Area Studies. One course. *Lahusen*

151, 152. Fourth-Year Russian Conversation. (FL) Conversation course for students who are enrolled in, or have completed, Russian 195, 196. Half course each. *Staff*

155. Special Topics in Russian and American Culture. (AL) Addresses the broad, interdisciplinary issue of identity and otherness while studying specifically what happens when the cultures of Russia and the United States come into contact. Taught in English. C-L: Comparative Area Studies. One course. *Lahusen and Van Tuyl*

157S. Law, Culture, and the Russian Legal Tradition. (CZ, SS) A study of the development of the Russian legal tradition, with particular emphasis on the historical and cultural factors that have contributed to its emergence, comparing the Russian tradition with the Western legal tradition. How law, lawyers, and legal institutions have been portrayed in Russian popular culture, especially Russian literature. Taught in English. Open only to students in the FOCUS Program. C-L: Public Policy Studies 131S. One course. *Newcity*

159. Women's Autobiographies in European Contexts: Telling the Self in Russia, France, and Britain. (AL) A comparative approach to women's autobiography (in England, France, and Russia) in the nineteenth and twentieth centuries, using texts from approximately the same time periods. C-L: Comparative Area Studies and Women's Studies. One course. *Gheith*

161. Masterpieces of Nineteenth-Century Russian Literature I. (AL) Selected nineteenth-century authors, works, and genres. Authors include Pushkin, Lermontov, Gogol, Turgenev, Herzen, Goncharov, and Dostoevsky. Taught in English. C-L: Comparative Area Studies. One course. *Staff*

162. Masterpieces of Nineteenth-Century Russian Literature II. (AL) Selected authors, works, and genres from the second half of the nineteenth century. Authors include Turgenev, Chernyshevsky, Dostoevsky, Tolstoy, Saltykov-Shchedrin, and Chekhov. Taught in English. C-L: Comparative Area Studies. One course. *Staff*

163. Literature of Former Soviet Republics. (AL) Ukrainian realism of the nineteenth century, futurism, neoclassicism, and the literary struggle of the 1920s; Belorussian literature; Lithuanian psychological prose; the Estonian experimental novel; Georgian literature from Rustaveli to the philosophical novel of the 1970s; the work of Chingiz Aitmatov; Soviet "recent literacy." Taught in English. C-L: Comparative Area Studies. One course. *Dobrenko*

164. Symbolist Movement in Russia. (AL) History and theory of the philosophy, poetry, prose, and criticism of the Russian variant of the interdisciplinary and international movement. The momentous movement spawning a variety of other creative schools that constitute twentieth-century Russian modernism. Taught in English. One course. *Mickiewicz*

168S. Russian Classical Literature and Music. (AL) The interaction of literary and musical texts. Includes literary texts by Pushkin, Lermontov, Gogol, Leskov and musical texts (operas) by Tchaikovsky, Borodin, Glinka, Moussorgsky, Rimsky-Korsakov, Rubinstein, and Shostakovich. Taught in English. C-L: Comparative Area Studies. One course. *Dobrenko*

169. Women and Russian Literature. (AL) Issues of gender and society in women's writing in Russian from the eighteenth to the twentieth centuries. Both autobiographical writings and prose fiction. Discussions of whether Russian women's writings constitute a tradition and what role these works have played in Russian literature and culture. Taught in English. C-L: Comparative Area Studies and Women's Studies. One course. *Gheith*

170. Russian Dissident and Emigré Literature. (AL) The literature of opposition in Russia during the nineteenth and twentieth centuries, from Chaadaev and Chernyshevsky to Grossman, Solzhenitsyn, and Zinoviev. Taught in English or Russian. C-L: Comparative Area Studies. One course. *Lahusen*

173S. Gogol. (AL) Life, works, and criticism. Readings include *Dead Souls*, *The Inspector General*, *Petersburg Tales*, and other short fiction. Taught in English. C-L: Comparative Area Studies. One course. *Lahusen*

174. Gender and Language. (SS) Theoretical approaches to the question of the interrelationship of gender and language including neurobiology, psychology, semiotics, feminist critical theory, philosophy of language, discourse analysis, and linguistic theory. Taught in English. C-L: Cultural Anthropology 174 and English 115. One course. *Andrews*

175. Tolstoy. (AL) Introduction to life, works, and criticism. Readings include: *War and Peace*, *Anna Karenina*, the shorter fiction, dramatic works and essays. Taught in English. C-L: Comparative Area Studies. One course. *Van Tuyl*

176. Dostoevsky. (AL) Introduction to life, works, and criticism. Readings include: *Crime and Punishment*, *The Idiot*, and *The Brothers Karamazov*. Taught in English. C-L: Comparative Area Studies. One course. *Flath, Gheith, or Van Tuyl*

177S. Chekhov. (AL) Drama and prose works. Taught in English. Not open to students who have taken Drama 157S/Russian 174S (Chekhov). C-L: Comparative Area Studies and Drama 177S. One course. *Flath and staff*

178A. Russian Short Fiction. (AL) The history, development, and shifts of Russian short fiction in the nineteenth and twentieth centuries. Authors include Dostoevsky, Vovchok, Leskov, Chekhov, Gippius, and Zoshchenko. Topics include gender, genre, and national identity in historical/cultural context. Taught in English. C-L: Comparative Area Studies. One course. *Gheith*

178B. Russian Short Fiction in the Original. (AL, FL) Same as Russian 178A except taught in Russian. C-L: Comparative Area Studies. One course. *Gheith*

179S. Selected Topics in Russian Literature. (AL) Women writers of the twentieth century, Soviet film, *samizdat/tamizdat*, the Petersburg paradigm in Russian literature and culture. Taught in English. One course. *Staff*

180. Early Twentieth-Century Russian Literature: From Symbolism to the 1920s. (AL) Symbolism, acmeism, futurism, imagism, proletarian literature. Authors include Bely, Sologub, Blok, Vyacheslav Ivanov, Akhmatova, Mandelshtam, Mayakovsky, Khlebnikov, Gorky, Bogdanov, Gastev. Taught in English. C-L: Comparative Area Studies. One course. *Lahusen or staff*

181. The Soviet 1920s: The Road to a New Synthesis. (AL) The literary struggle of the 1920s; proletarian literature from the Smithy to RAPP, LEF and the fate of the avant-garde, the aesthetic conception of Pereval, the literature of the absurd, Oberiu and the Serapion Brothers. Authors include Kirillov, Gladkov, Babel, Pilnyak, Olesha, Zamyatin, Platonov, Kharms, and Pasternak. Taught in English. Not open to students who have taken the former Russian 181, Early Twentieth-Century Russian Literature. C-L: Comparative Area Studies. One course. *Dobrenko or Lahusen*

182. Socialist Realism: Soviet Literature of the 1930s and 1940s. (AL) The Stalin era of Russian literature, the genesis and development of socialist realism, Soviet literature and the themes of boundaries and war. Authors include Sholokhov, Ostrovsky, Fadeev, Azhaev, Babaevsky, Kochetov, and Simonov. Taught in English. C-L: Comparative Area Studies and History 185A. One course. *Lahusen*

183. Post-Stalinist and Contemporary Soviet Literature. (AL) Literature of the thaw after Stalin, the young prose, little realism, new modernism, and rural prose. Authors include Aksyonov, Trifonov, Baranskaya, Bitov, Solzhenitsyn, Rasputin, Shukshin, and Zalygin. Taught in English. C-L: Comparative Area Studies. One course. *Dobrenko or Lahusen*

185S. Introduction to Slavic Linguistics. (FL) Basic introduction to linguistic terminology; emphasis on synchronic linguistic theory in the East, West, and South Slavic areas. Phonological, morphological, and syntactic structure of contemporary standard Russian. Readings in English and Russian. C-L: Comparative Area Studies and Linguistics. One course. *Andrews*

186S. History of the Russian Language. (AL, FL) The development of the Russian language from the eleventh century, with consideration of the origins of modern literary and dialectal features. Readings in Russian. Prerequisite: second year Russian or consent of instructor. C-L: Comparative Area Studies and Linguistics. One course. *Staff*

187. Intensive Advanced Russian. (FL) Advanced grammar review with an emphasis on the refinement of oral and written language skills. Development of writing style through compositions and essays. Prerequisite: Russian 102S or consent of instructor. Two courses. *Andrews*

190S. Introduction to Russian Civilization. (CZ) Basic knowledge of Russian society, history of ideas, folklore tradition, orthodoxy, and history of Russian readership. Taught in English. C-L: Comparative Area Studies and History 146S. One course. *Pelech*

191, 192. Independent Study. Directed reading and research. Open only to qualified students by consent of director of undergraduate studies. One course each. *Staff*

193, 194. Independent Study. Directed reading and research for qualified seniors. Consent of director of undergraduate studies required. One course each. *Staff*

195. Advanced Russian. (FL) Advanced grammar review with an emphasis on the refinement of oral and written language skills. Development of writing style through compositions and essays. Prerequisite: Russian 102S or consent of instructor. C-L: Comparative Area Studies. One course. *Andrews*

196. Advanced Russian: Readings, Translation, and Syntax. (FL) Intensive reading and conversation with emphasis on contemporary Russian literary and Soviet press texts. English-Russian translation stressed. Russian media, including television and films. Prerequisite: Russian 195 or consent of instructor. C-L: Comparative Area Studies. One course. *Andrews*

198, 199. Russian Stylistics and Conversation. (AL, FL) Refinement of stylistic control and range in spoken and written Russian. Emphasis on fluent discursive skills, as well as development of expository prose style. Prerequisites: Russian 195 and 196, or consent of instructor. One course each. *Maksimova*

For Seniors and Graduates

201S. Topics in Comparative Slavic Linguistics. (SS) A cycle of survey courses on the phonology, morphology, and dialects of the Slavic languages. Taught in English. Readings in Russian.

- A. East Slavic
- B. West Slavic
- C. South Slavic
- D. Common Slavic

C-L: Linguistics. One course. *Andrews*

202. Semiotics of Culture. (AL, CZ) The theory of literature, arts, ethnicity, modernity, and culture. Texts include the critical works of Lotman and the Tartu School, Bakhtin, Eco, Kristeva, Voloshinov, Medvedev, Barthes, Todorov, Jakobson, Ivanov, and Sebeok. C-L: Cultural Anthropology 202 and English 206. One course. *Andrews*

- 203S. Old Church Slavonic. (FL)** Introduction to the language of the earliest Slavic texts. Close study of phonological and morphological systems, reading of texts and discussion. Taught in English. C-L: Linguistics and Religion 229S. One course. *Staff*
- 205. Semiotics and Linguistics. (SS)** A survey of modern semiotics, particularly the works of C. S. Peirce and Umberto Eco. Semiotic works directly related to modern linguistic thought and linguistic sign theory. Emphasis on the interdisciplinary aspects of semiotic theory. C-L: English 205 and Linguistics. One course. *Andrews*
- 206. Russian Modernism. (AL)** Russian culture between the 1890s and the 1920s, including visual, musical, literary arts, and developments ranging from Neo-Christian mysticism, cosmism, synthesis of the arts, and revolutionary activism. Focus on literary-philosophical thought of that period. Taught in English. One course. *Mickiewicz*
- 208. Stylistic and Compositional Elements of Scholarly Russian. (FL)** Introduction to Russian texts and terminology including business, economics, law, history, political sciences, psychology, linguistics, and literary criticism. Prerequisite: Russian 64 or consent of instructor. One course. *Maksimova*
- 209. Intensive Advanced Stylistics. (AL, FL)** Refinement of stylistic control and range in spoken and written Russian. Emphasis on fluent discursive skills, as well as development of expository prose style. Prerequisites: Russian 195 and 196, or consent of instructor. Two courses. *Maksimova*
- 210. Literature and Criticism of Socialist Realism. (AL)** The genesis and development of Soviet socialist realism. A survey of Soviet literary theories from Lunacharsky to Ovcharenko, and contemporary Western criticism (for example, K. Clark, R. Robin). A critical approach to the dialogic alternative to monologic literature through literary illustration (selected Soviet literary works from the 1930s to the present day). Taught in English. One course. *Lahusen*
- 211. Legal and Business Russian. (CZ, FL)** Introduction to Russian language and culture in the area of legal studies and conducting business in or with Russia and other Commonwealth of Independent States countries. Primary materials include contracts, advertising, and financial documents. Prerequisites: Russian 1 and 2 or consent of instructor. One course. *Andrews or Maksimova*
- 212S. Proseminar. (AL)** Introduction to research methodologies, professional skills (including discussions of teaching), as well as a theoretical basis for students in Slavic linguistics and literature. Mandatory for all graduate students and open to upper-level undergraduates. Team taught; taught in English and Russian. One course. *Staff*
- 213. Silver Age of Russian Literature. (AL)** Poetics of symbolism, acmeism, futurism, imagism, and formalism. Representative world views and critical and artistic methods. Students of Slavic and Russian will read the materials in the original language. One course. *Mickiewicz*
- 214. Gender, Nationalities, and Russian Literary Traditions. (AL, CZ)** Russian literature of the nineteenth and twentieth centuries compared with both Western and Eastern literature of the same time period, including questions of national identity. Readings include: Pushkin, Lermontov, Tur, Aitmatov, and Iskander. C-L: Literature 214 and Women's Studies. One course. *Gheith*
- 230. Soviet Cinema. (AL)** History of Soviet film industry from silent to sound period. Overview of major theorist-filmmakers: Eisenstein, Pudovkin, Vertov. Issues of reception, audience, politics, form, national and ethnic identities. Taught in English. One course. *Gaines, Jameson, and Lahusen*

250. Trends in Russian and East European Literary Criticism and Beyond. (AL) The major critical movements in the nineteenth and twentieth centuries in Russia, East-Central Europe, and the West. Authors and theories include the Belinsky school, formalism, Bakhtin, structuralism, semiotics, and psychoanalytic and feminist theory. Taught in English or Russian. Readings in English or Russian. One course. *Dobrenko or Gheith*

257. Law, Culture, and the Russian Legal Tradition. (CZ) A study of the development of the Russian legal tradition, with particular emphasis on the historical and cultural factors that have contributed to its emergence, comparing the Russian tradition with the Western legal tradition. How law, lawyers, and legal institutions have been portrayed in Russian popular culture, especially Russian literature. Taught in English. One course. *Newcity*

261. Masterpieces of Nineteenth-Century Russian Literature I. (AL) Selected nineteenth-century authors, works, and genres. Authors include Pushkin, Lermontov, Gogol, Turgenev, Herzen, Goncharov, and Dostoevsky. Taught in English. Readings in Russian. C-L: Comparative Area Studies. One course. *Staff*

262. Masterpieces of Nineteenth-Century Russian Literature II. (AL) Selected authors, works, and genres from the second half of the nineteenth century. Authors include Turgenev, Chernyshevsky, Dostoevsky, Tolstoy, Saltykov-Shchedrin, and Chekhov. Taught in English. Readings in Russian. C-L: Comparative Area Studies. One course. *Staff*

264. Symbolist Movement in Russia. (AL) History and theory of the philosophy, poetry, prose, and criticism of the Russian variant of the interdisciplinary and international movement. The momentous movement spawning a variety of other creative schools that constitute twentieth-century Russian modernism. Taught in English. Readings in Russian. One course. *Mickiewicz*

269. Women and Russian Literature. (AL) Issues of gender and society in women's writing in Russian from the eighteenth to the twentieth centuries. Both autobiographical writings and prose fiction. Discussions of whether Russian women's writings constitute a tradition and what role these works have played in Russian literature and culture. Taught in English. Readings in Russian. C-L: Women's Studies. One course. *Gheith*

273S. Gogol. (AL) Life, works, and criticism. Readings include *Dead Souls*, *The Inspector General*, *Petersburg Tales*, and other short fiction. Readings in Russian. One course. *Lahusen*

275. Tolstoy. (AL) Introduction to life, works, and criticism. Readings include: *War and Peace*, *Anna Karenina*, the shorter fiction, dramatic works and essays. Taught in English. Readings in Russian. One course. *Van Tuyl*

278. Russian Short Fiction. (AL) The history, development, and discontinuities of Russian short fiction in the nineteenth and twentieth centuries. Authors include Dostoevsky, Vovchok, Leskov, Chekhov, Gippius, and Zoshchenko. Topics include gender, genre, and national identity in historical/cultural context. Taught in English. C-L: Comparative Area Studies. One course. *Gheith*

280. Early Twentieth-Century Russian Literature: From Symbolism to the 1920s. (AL) Symbolism, acmeism, futurism, imagism, proletarian literature. Authors include Bely, Sologub, Bryusov, Blok, Vyacheslav Ivanov, Khodasevich, Akhmatova, Mandelshtam, Mayakovsky, Khlebnikov, Gorky, Bogdanov, Gastevo. Readings in Russian. One course. *Lahusen*

281. The Soviet 1920s: The Road to a New Synthesis. (AL) The literary struggle of the 1920s; proletarian literature from the SMYTH to RAPP, LEF and the fate of the avant-garde, the aesthetic conception of Pereval, the literature of the absurd, Oberiu and the Serapion Brothers. Authors include Kirillov, Gladkov, Babel, Pilnyak, Olesha, Zamyatin, Platonov,

Kharms, and Pasternak. Readings in Russian. C-L: History 242B. One course. *Dobrenko or Lahusen*

284. Late- and Post-Soviet Literature. (AL) From the "recovered" avant-garde to the new literature during the Gorbachev era and beyond. The unmasking of Soviet history and its aestheticization. Underground literature and Soviet postmodernism. Authors include Rybakov, Pietsukh, Petrushevskaya, Kuraev, Tolstaya, Viktor Erofeyev, Makanin, Prigov, and Narbikova. Readings in Russian. One course. *Dobrenko, Gheith, or Lahusen*

285. Babel and the Russian-Jewish Cultural Dialogue of the Twentieth Century. (AL) The Jews and the Russian revolution. The Odessa school in the literature of the 1920s. Works include *Red Cavalry*, *Odessa Stories*, and *The Sunset*. Readings in English or Russian. One course. *Dobrenko*

286S. Zamyatin. (AL) The novel *We*, short fiction, and essays. Taught in English. Readings in English or Russian. Not open to students who have taken the former Russian 177S/277S (Zamyatin). One course. *Andrews, Maksimova, or Lahusen*

290. Trifonov, or the Life and Death of the Soviet Intelligentsia. (AL) The Russian and Soviet intelligentsia, its role and historical responsibility, depicted by one of the most visible representatives of the "generation of the sixties." Works include *The Exchange*, *Taking Stock*, *The Long Goodbye*, *Another Life*, *The House on the Embankment*, *The Old Man*. Readings in Russian. One course. *Dobrenko*

298. Akhmatova. (AL) The works and times of Anna Akhmatova, the most prominent woman poet in Russian history. Focus on Akhmatova's works and the Russian political and artistic milieu of the 1910s and 1920s, socio-literary issues of later periods. Readings include the lyric poems of 1910-60, *Requiem*, and *Poem Without a Hero*. Readings in Russian. One course. *Van Tuijl*

Courses Currently Unscheduled

141, 142. Teaching Practicum

165S. Old Russian Literature. (AL)

172S. Pushkin and His Time. (AL)

184. Late- and Post-Soviet Literature. (AL)

188S, 189S. Advanced Russian Language and Culture. (CZ, FL)

197. Russian Poetry. (AL)

204S. Russian Folklore and Popular Culture. (CZ, FL)

207S. Semantics. (SS)

240S. Russian Literary Discourse. (AL)

265S. Literature of Early Russia. (AL)

266S. The Sources of Modern Russian Literature: The Eighteenth Century. (AL)

272S. Pushkin and His Time. (AL)

276. Dostoevsky. (AL)

277S. Chekhov. (AL)

279S. Literature of the Former Soviet Republics. (AL)

282. Socialist Realism: Soviet Literature of the 1930s and 1940s. (AL)

283. Post-Stalinist and Contemporary Soviet Literature. (AL)

287S. Platonov. (AL)

288S. Bulgakov. (AL)

BALTO-FINNIC (BF)

1, 2. Elementary Estonian. (FL) Introduction to understanding, speaking, reading, and writing Estonian. No preliminary knowledge of Estonian necessary. One course each. *Staff*

3, 4. Elementary Finnish. (FL) Introduction to understanding, speaking, reading, and writing Finnish. No preliminary knowledge of Finnish necessary. One course each. *Staff*

200. Balto-Finnic Linguistics. (FL) Introduction to Balto-Finnic languages with emphasis on the established literary languages, Finnish and Estonian. Analysis of their phonological and morphological structures. Survey of related nonliterary languages such as Karelian and Vepsian. Taught in English. C-L: Linguistics. One course. *Staff*

POLISH (POL)

1-2. Elementary Polish. (FL) Introduction to understanding, speaking, reading, and writing Polish. No preliminary knowledge of Polish necessary. Two courses. *Lahusen*

14. Intensive Elementary Polish. (FL) Polish 1 and 2 combined in one semester. Two meetings daily. Required recording-listening practice in the language laboratory. Work on understanding, speaking, reading, and writing. Survey of main elements of grammar. No preliminary knowledge of Polish necessary. Two courses. *Lahusen and staff*

63, 64. Intermediate Polish. (FL) Intensive classroom and laboratory practice in spoken and written patterns. Readings in contemporary literature. Prerequisites: Polish 1 and 2, or consent of instructor. One course each. *Lahusen*

187. Introduction to Polish Literature. (AL) Survey of nineteenth- and twentieth-century Polish literature. Taught in English. C-L: Comparative Area Studies. One course. *Lahusen*

Courses Currently Unscheduled

100. Poland in Transition. (CZ)

174S. Topics in Polish Literature. (AL)

SERBIAN AND CROATIAN (SCR)

1-2. Elementary Serbian and Croatian. (FL) Introduction to understanding, speaking, reading, and writing Serbian and Croatian. No preliminary knowledge of Serbian and Croatian necessary. Two courses. *Andrews*

14. Intensive Elementary Serbian and Croatian. (FL) Serbian and Croatian 1 and 2 combined in one semester. Two meetings daily. Required recording-listening practice in the language laboratory. Work on understanding, speaking, reading, and writing. Survey of main elements of grammar. No preliminary knowledge of Serbian and Croatian necessary. Two courses. *Andrews*

63, 64. Intermediate Serbian and Croatian. (FL) Intensive classroom and laboratory practice in spoken and written patterns. Reading in contemporary literature. Prerequisites: Serbian and Croatian 1 and 2. One course each. *Andrews*

70. Intensive Intermediate Serbian and Croatian. (FL) Serbian and Croatian 63 and 64 combined. Two meetings daily, as well as daily computer and language laboratory work. Two courses. *Andrews*

UKRAINIAN (UKR)

1-2. Elementary Ukrainian. (FL) Introduction to understanding, speaking, reading, and writing Ukrainian. No preliminary knowledge of Ukrainian necessary. Two courses. *Dobrenko*

Courses Currently Unscheduled

14. Intensive Elementary Ukrainian. (FL)

187. Introduction to Ukrainian Literature. (AL)

THE MAJOR

Major Requirements. A minimum of ten courses in the department, eight of which must be at the 100 level or above. All majors must take the following courses: Russian 63, 64, 101S, 102S, 195, 196 or equivalent. Each major is additionally required to take four courses, of which at least two have a primary focus on Russian literature. The department urges students to consider course work that would include at least one 200-level course.

Honors/Distinction

The department offers work leading to graduation with distinction. See the section on honors in this bulletin and the departmental director of undergraduate studies.

THE MINOR

Requirements. Five courses, three of which must be at the 100 level or above.

Sociology (SOC)

Professor Land, *Chair*; Professor Wilson, *Director of Undergraduate Studies*; Professors K. Cook, DiPrete, George, Gereffi, Lin, Simpson, Smith, Spenner, and Tiryakian; Associate Professors O'Rand and Zhou; Assistant Professors Buchmann, Gao, Jackson, Parnell, Shanahan and Thornton; Professors Emeriti Back, Kerckhoff, Maddox, Myers, and Preiss; Adjunct Professors Carroll (religion), P. Cook (public policy), Lewin (business), and O'Barr (cultural anthropology); Adjunct Assistant Professor Gold (psychiatry and aging center); Adjunct Research Professor Manton (demographic studies); Scholar-in-Residence Gittler

A major or minor is available in this department.

Sociology combines an appreciation of human beings' capacity for self-realization with a scientific understanding of the causes and consequences of their social behavior. Each course aims to develop both the analytical and critical skills necessary for understanding and evaluating social institutions and social change. Emphasis is upon contemporary research and the use of sociological data in tackling social problems. Active involvement in the learning process is fostered through seminars, independent study, honors work, and internships.

10D. Introduction to Sociology. (SS) Structure and dynamics of groups, organizations, and institutions; social behavior over the life cycle; social control and deviance; population and social ecology; formation and change of societies. Two lectures and one discussion section. One course. *O'Rand or Parnell*

11. Contemporary Social Problems. (SS) A survey of approaches to the study of current social problems and social trends. Sexism, racism, age discrimination; job displacement by technological change; social consequences of environmental pollution; unemployment and poverty; interpersonal problems associated with changes in family structures; maldistribution of health care and educational opportunities; deviance. One course. *Land*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

98. Introduction to Canada. (SS) See C-L: Canadian Studies 98; also C-L: Comparative Area Studies, Economics 98, History 98, and Political Science 98. One course. *Thompson*

101A, S. Contemporary American Society. (SS) Social trends and problems and their effects on individuals and society. Urbanization; bureaucracy; distribution of wealth, income, and power; status of minorities. Open only to students in the FOCUS Program. One course. *Simpson or Spenner*

101B, S. Science and Technology in Twentieth-Century America. (SS) Science and technology as embedded in social and political institutions that constrain and promote their development over time. The complex and dynamic set of relations during the twentieth century across scientific and technological domains (for example, cybernetics, atomic energy, and biotechnology). Particularly controversial events and theories that illustrate these relations. Open only to students in the FOCUS Program. One course. *O'Rand*

101C, S. A Single Europe? Dreams and Reality. (SS) Twentieth-century forces and happenings which undergird the notion of a "Single Europe," twelve hundred years after its ancestral beginnings with Charlemagne. Structural, ideological, and leadership factors that seek, after two calamitous world wars, to renovate the European community into a broad socioeconomic and perhaps even political union. Open only to students in the FOCUS Program. One course. *Tiryakian*

101E, S. The Political Economy of East Asia: From Nation-State to Regional Cooperation. (SS) The emerging Asian-Pacific region as the center of international political economy in the next century. Emphasis on China, Japan, South Korea, Taiwan, and Hong Kong; focus on how East Asian countries responded to the great challenge of industrialization in the nineteenth and twentieth centuries, what kind of impact the industrialization exerted on their cultures and societies, and what the significance of ongoing regional cooperation in this region will be to the new order of international politics and economy in the post cold war era. Open only to students in the FOCUS Program. One course. *Gao*

103. Sexuality and Culture in America. (SS) See C-L: Cultural Anthropology 103; also C-L: Study of Sexualities and Women's Studies. One course. *Luttrell*

106. Social Psychology. (SS) See C-L: Psychology 116; also C-L: Women's Studies. One course. *Costanzo, Fischer, George, or staff*

107. Bargaining, Power, and Influence in Social Interaction. (SS) How power and influences are exercised, conflict is handled, cooperation promoted, and agreements negotiated in social groups. Related issues in the study of social interaction, such as the role of emotion. One course. *Cook or Spenner*

109. Introduction to North America. (CZ, SS) See C-L: North American Studies 110; also C-L: Cultural Anthropology 129, Economics 115, History 108F, Political Science 119, Public Policy Studies 115, and Romance Studies 125. One course. *Shanahan*

110, A-E. Comparative Sociology: Selected Areas. (SS) Comparative studies of selected areas of the world, considering differences and similarities in culture and communication, family, law and social control, urban forms and the organization of work. Areas vary each semester offered and are designated by letter.

- A. Africa
- B. Asia
- C. Europe
- D. Latin America
- E. Cross-Regional

C-L: Comparative Area Studies. One course. *Gao, Gereffi, Lin, Smith, or Tiryakian*

111. Social Inequality: An International Perspective. (SS) The nature, forms, and socioeconomic bases of inequality. Age, gender, race, ethnicity, class, region, and family as dimensions of inequality. Variations in the structure of inequality over time and across nations. How educational institutions, economic development, work institutions, and state welfare programs affect the shape of inequality. Social inequality and social mobility. C-L: Women's Studies. One course. *DiPrete or O'Rand*

112. American Demographics. (SS) Examination of trends in the fertility, migration, geographic distribution, and composition of the United States population. Consequences for lifestyles, social trends, consumer markets, health care, and public policy. One course. *Land or Parnell*

116. Race and Ethnic Relations. (SS) History and changing nature of race and ethnic relations, with special reference to the United States. Sources, forms, and consequences of racial discrimination; movements for racial integration and separatism; the intersection of race, class, and gender. C-L: African and African-American Studies 116. One course. *Jackson*

117. Childhood in Social Perspective. (SS) Social forces affecting the place and purpose of children in society, their relations to adults and their treatment by social institutions such as schools and governments. Topics include parent-child relations, sibling relations, child abuse, children's rights, child labor, and the portrayal of children in the mass media. One course. *Simpson*

118. Sex, Gender, and Society. (SS) Nature and acquisition of sex roles. Cross-cultural variations. Developing nature of sex roles in American society. C-L: Comparative Area Studies and Women's Studies. One course. *Buchmann or O'Rand*

119. Juvenile Delinquency. (SS) Environments in which juvenile delinquency develops; delinquent subcultures and peer groups; societal reactions to delinquency in schools, courts, and other agencies. One course. *Land*

Sociology 120, 122, and 123 are designed as a sequence and might optimally be taken in that order, with Sociology 120 being recommended preparation for 122 and 123. However, there are no prerequisites.

120. Causes of Crime. (SS) Definition, types, and extent of crime; biological, psychological, economic, and social causes of criminality; explanation and critical evaluation of theories of crime; structure and patterns of recruitment of criminal organizations; social reactions to crime and the justice system. One course. *Land*

122. Punishment and Treatment of Deviants. (SS) Concepts of punishment and rehabilitation. Programs and facilities for deviants. Structure and operation of "total" institutions, such as prisons and hospitals. Problems of returning to family and community life. One course. *Staff*

123. Social Aspects of Mental Illness. (SS) Theoretical and practical sociological contributions to problems of etiology, definition, law, and treatment; comparisons with other contributions; questions of public policy and programs. One course. *George or Jackson*

124. Human Development. (SS) Especially for sophomores. Juniors and seniors by consent only. See C-L: Human Development 124; also C-L: Psychology 124. One course. *Anderson, Gustafson, or staff*

125. Comparative Approaches to Global Issues. (SS) Not open to students who have taken Religion 121. See C-L: Comparative Area Studies 125; also C-L: Cultural Anthropology 125, History 137, Political Science 125, and Religion 183. One course. *Staff*

126. Third World Development. (SS) Theories concerning the role of transnational corporations and international financial institutions (for example, World Bank) in the development of Third World nations, assessed with the aid of sociological and economic data. C-L: Comparative Area Studies. One course. *Gereffi or Parnell*

132. Methods of Social Research. (SS) Principles of social research, design of sociological studies, sampling, and data collection with special attention to survey techniques. One course. *DiPrete or Lin*

133. Statistical Methods. (QR) Elementary statistical techniques and their application to the analysis and interpretation of social science data. Theory of inference is stressed. C-L: Psychology 117. One course. *Land or Spenner*

138D. History of Social Thought. (SS) Theories of society and social relations in the writings of Montesquieu, Rousseau, Comte, Marx, Weber, Durkheim, Simmel, Veblen, Sorokin, and others. The history of sociology in relation to philosophical currents, social movements, and transformation of the modern world. Two lectures and one discussion. One course. *Tiryakian or Wilson*

139. Marxism and Society. (SS) See C-L: Cultural Anthropology 139; also C-L: Comparative Area Studies, Education 139, History 186, and Literature 181. One course. *Staff*

141. Consuming Passions. (SS) Consumption as the appropriation of meaning to express individual and collective identity, social forces leading to the rise of societies organized around consumption, global diffusion of consumer culture, social dynamics of change in consumption (for example, fashion), and social constraints on consumption (for example, environmentalism). One course. *Gao or Wilson*

142. Organizations and Global Competitiveness. (SS) Competition between national economies as understood in the context of social factors such as ethnicity, kinship, gender, education, with a special emphasis on the role of multinational corporations, public bureaucracies, and small firms. One course. *Buchmann or Gereffi*

143. Management and Labor Relations. (SS) Theories and current research on the interlocking roles of business and labor in the United States and elsewhere. One course. *Gereffi or Thornton*

144. Organizations and Environments. (SS) How organizations (governments, cultures, and technology) are affected by the environment in which they must operate. Competitive strategies (for example, takeovers and mergers); corporate cultures (for example, United States versus Japan); and the impact of technology. One course. *Gao or Thornton*

145. Nation, Regions, and the Global Economy. (SS) The changing configuration of global capitalism, with emphasis on comparing global regions (North America, Latin America, Europe, Africa, and Asia). The internal dynamics of these regions, including the development strategies of selected nations, interregional comparisons (for example, regional divisions of labor, state-society relationships, the nature of their business systems, quality of life issues). C-L: Comparative Area Studies. One course. *Gereffi or Shanahan*

146. Organizational and Occupational Deviance. (SS) Organizational and occupational deviance ("white collar crimes") rooted in the structure and workings of modern organizations, for example, business corporations, nonprofit agencies and religious institutions, government bureaucracies. Violations of regulatory standards, corporate fraud, and unethical occupational conduct identifying the characteristics of offending organizations and offenders. Various control mechanisms, such as regulatory agencies, the media, and whistleblowing. One course. *Simpson or Thornton*

149. Sexuality and Society. (SS) Sociocultural factors affecting sexual behavior. Changing beliefs about sex; how sexual knowledge is socially learned and sexual identities formed; the relation between power and sex; control over sexual expression. C-L: Study of Sexualities. One course. *Tiryakian*

150. The Changing American Family. (SS) Structure, organization, and social psychology of marital, parental, and sibling relations over the life cycle of a family; courtship, marriage, family dissolution in relation to contemporary American society; deviations from and alternatives to the traditional nuclear family. C-L: Women's Studies. One course. *Simpson*

151. Sociology of Religion. (SS) The religious factor in modern society and the social factor in modern religion. Major sociological theories and marginal religious groupings. One course. *Tiryakian or Wilson*

153. Sport and Society. (SS) The effect of sports on people, their self-image, and social roles. Relation of sports as an institution to the family, education, economics, and politics. One course. *Wilson*

155. Organizations and Management. (SS) Forms of work organization (corporations, government agencies), the social forces shaping them (management styles, technology, government policy, labor markets), and their effects on employees (productivity, work satisfaction, turnover). C-L: Women's Studies. One course. *DiPrete, Thornton, or Zhou*

156. Global Contexts of Science and Technology. (SS) National variations in the structures of scientific systems, and their consequences for the production and application of scientific knowledge, paying particular attention to how these variations are shaped by national differences in politics, economics, and education. Special focus on recent developments in the biomedical sciences, such as genetic engineering and bio-ecology. One course. *O'Rand*

157. The Legal Profession and the Law. (SS) Development of the American legal profession, emphasizing the recruitment and training of lawyers, the ways lawyers' work is organized, the role of professional associations, the determinants of success in legal practice, and the influence of legal ethics on practice. One course. *Simpson or Wilson*

158. Markets and Marketing. (SS) Markets as systems of social exchange: how they are organized and developed; their relationship to other social structures such as families, work organizations, and the state; their impact on individuals, careers, consumption patterns, and lifestyles. One course. *DiPrete or Spenner*

159. The Sociology of Entrepreneurship. (SS) The social origins and careers of entrepreneurs. The interrelation of their work and family roles and the distinctiveness of their values and interests. The role of entrepreneurial activity in societal development, and its function in different industries, ethnic groups, and societies. One course. *Thornton*

160. Advertising and Society: Global Perspective. (SS) See C-L: Cultural Anthropology 110; also C-L: Comparative Area Studies, English 120, Film and Video, and Women's Studies. One course. *Luttrell, O'Barr, J. Smith, or Wilson*

161. Adulthood and Aging. (SS) Sociological and psychological perspectives on aging, from adolescence through old age and death; demography of human aging; problems caused by increased longevity; policy issues. C-L: Women's Studies. One course. *George, Gold, or O'Rand*

162. Health and Illness in Society. (SS) Relations between patients and health professionals, and utilization of resources for health care. One course. *Lin*

163. Aging and Health. (SS) Illness and health care utilization among the elderly, comparison to other populations, gender and race differences, medicare and medicaid, individual adjustment to aging and illness, social support for sick elderly, the decision to institutionalize, policy debate over euthanasia. One course. *George or Gold*

165. Occupations, Professions, and Careers. (SS) How occupations organize and control labor markets, define services, chart career lines, and develop and sustain occupational identities. C-L: Women's Studies. One course. *O'Rand, Simpson, or Spenner*

167. The Social Bases of Politics. (SS) Theories of and research on political power at the community, national, and international levels. C-L: Canadian Studies and Women's Studies. One course. *Gereffi or Smith*

169. Psychosocial Aspects of Human Development. (SS) See C-L: Psychology 130; also C-L: Human Development 180. One course. *Staff*

170. Mass Media. (SS) An analysis of the role of radio, the press, magazines, movies, and television. An examination of the selective audiences, content characteristics, controlling elements, and organizational structure of the various media. Comparative Canadian material considered where feasible. C-L: Canadian Studies, Comparative Area Studies, and Film and Video. One course. *Smith*

171. Comparative Health Care Systems. (SS) The interaction of historical, political, economic, legal/ethical, and sociological factors in the organization and operation of health care systems in the United States, the United Kingdom, Sweden, and elsewhere. C-L: Canadian Studies and Comparative Area Studies. One course. *Staff*

175. Contemporary Global Issues. (SS) See C-L: Comparative Area Studies 109; also C-L: Cultural Anthropology 109, History 109, and Political Science 160. One course. *Staff*

179. Modern Nationalist Movements. (SS) A comparative sociological study of major nationalist movements. First World nationalism in industrial societies, Third World nationalism in colonial and postcolonial societies, and recent Second World nationalism in socialist societies. C-L: Canadian Studies and Comparative Area Studies. One course. *Tiryakian*

182. Media in Comparative Perspective. (SS) Impact of mass media outside the United States. Cross-national comparisons of media content, audiences, and control. Relationships of governments to media and media policies. International flow of media materials and their cross-national impact. C-L: Canadian Studies, Comparative Area Studies, Film and Video, and Political Science 180. One course. *Smith*

184S. Canadian Issues. (SS) Prerequisite: Canadian Studies 98 or consent of instructor. See C-L: Canadian Studies 184S; also C-L: Comparative Area Studies, Cultural Anthropology 184S, Economics 184S, History 184S, and Political Science 184S. One course. *Staff*

185S. The Canadian Health Care System. (SS) See C-L: Canadian Studies 185S; also C-L: Comparative Area Studies, Cultural Anthropology 185S, Economics 185S, History 108E, Political Science 185S, and Public Policy Studies 187S. One course. *Warren or staff*

188B, S. Colonialism, Ethnicity, and Gender in Postrevolutionary Bolivia. (CZ, FL) Analysis of Latin American colonialism and ethnicity based on the writings of Balandier and Casanovas. Special emphasis on Bolivian colonialism as reflected in Andean oral history and the institutionalization of the Indian movement. The situation of Aymara-speaking women and their role in the informal economy of La Paz and El Alto. (Taught in Spanish in Bolivia.) C-L: Cultural Anthropology 199E, Spanish 140B, and Women's Studies. One course. *Staff*

188C. East Asian Political Economy: Institutions, Networks, and Politics. (SS) Investigation of new frontiers of East Asian political economy. How institutions, networks, and coalition politics influence policy choice and economic performance in East Asian countries. Primary focus on Korea and Taiwan with comparison to Japan. (Taught in Korea and Taiwan.) C-L: Comparative Area Studies, Political Science 100V, and Public Policy Studies 100A. One course. *Staff*

190. Markets and Management. (SS) Capstone course for students in the Markets and Management Studies Certificate Program and open only to them. Includes review of major perspectives and concepts from the program's core courses, and production of a major case study research project. One course. *DiPrete, Gereffi, Simpson, Spenner, or Thornton*

191-192. Markets and Management Studies Internship. A two-semester, one-credit sequence, open to students in the Markets and Management Studies Program (and to others on space-available basis) who are planning to pursue an internship in a business-related

setting. 191, typically taken in the spring, involves conceptualization of an intellectual problem that will be investigated in the internship. 192, typically taken in the fall, involves production of a paper based on the internship experience and containing substantive research and analysis. To receive course credit, students must successfully complete both 191 and 192. Counts as an approved elective toward the certificate. Consent of director of Markets and Management Studies Program required. One course. *Staff*

193, 194. Independent Study. Consent of instructor required. One course each. *Staff*

195S, 196S, 197S. Seminar in Special Topics. One course each. *Staff*

198. Special Topics in Sociology. Topics vary each semester. One course. *Staff*

For Seniors and Graduates

206. Sociological Theory. (SS) Structure, foundations, and historical antecedents of recent formulations of such theoretical approaches as phenomenological sociology, exchange theory, critical theory, structuralism, neo-Marxist sociology, sociobiology, and action theory. One course. *Tiryakian or Wilson*

207. Social Statistics I: Basic Concepts and Methods. (QR) Review of descriptive statistics; probability concepts; statistical inference, t-tests, and the analysis of variance. Bivariate correlation and regression, dummy variables, multiple regression, and the analysis of covariance. Stress on applications. Statistical computing using SPSS and other programs. One course. *DiPrete or Land*

208. Survey Research Methods. (SS) Theory and application of survey research techniques in the social sciences. Sampling, measurement, questionnaire construction and distribution, pretesting and posttesting, response effects, validity and reliability, scaling of data, data reduction and analysis. Prerequisite: Sociology 207 or the equivalent. One course. *Lin or Smith*

211S, A-E. Proseminars in Sociological Theory. (SS) Development of sociological thought; systematic sociological theory; interrelations with other social and behavioral sciences.

- A. Background of Sociology
 - B. Formal Aspects of Theory
 - C. Sociology of Knowledge
 - D. Evolutionary Theory and Sociobiology
 - E. Special Topics in Sociological Theory
- One course. *Tiryakian or Wilson*

212. Social Statistics II: Linear Models, Path Analysis, and Structural Equation Systems. (QR) Model specification, review of simple regression, the Gauss-Markov theorem, multiple regression in matrix form, ordinary and generalized least squares, residual and influence analysis. Path analysis, recursive and nonrecursive structural equation models; measurement errors and unobserved variables. Application of statistical computing packages. Prerequisite: Sociology 207 or equivalent. One course. *DiPrete or Land*

213. Social Statistics III: Discrete Multivariate Models. (QR) Assumptions, estimation, testing, and parameter interpretation for the log-linear, logit, logistic, and probit models. Model comparisons; applications of statistical computing packages and programs. Prerequisite: Sociology 212 or equivalent. One course. *DiPrete or Land*

214. Comparative and Historical Methods. (SS) Introduction to the theory of comparative research and analysis in the social sciences with special emphasis on comparative methods, quasi-experimental designs, and case studies. C-L: Comparative Area Studies and Political Science 217. One course. *Gereffi, Lin, Smith, or Tiryakian*

215. Basic Demographic Methods and Materials. (SS) Population composition, change, and distribution. Methods of standardizing and decomposing rates, life tables and population models, analysis of data from advanced and developing countries. Applications of computer programs for demographic analysis. Prerequisite: Sociology 207 or equivalent. One course. *Parnell*

217S, A-F. Proseminars in Social Statistics and Research Methods. (SS) Selected topics in the collection and analysis of social science data.

- A. Discrete and Continuous Models of Measurement
 - B. Hazards Models, Event History Analysis, and Panel Data
 - C. Dynamic Models and Time Series Analysis
 - D. Research Design
 - E. Evaluation Research Methods
 - F. Special Topics in Social Statistics and Research Methods
- One course. *DiPrete or Land*

221S, A-D. Proseminars in Aging and Life Course Analysis. (SS) Selected topics in socialization, human development, status attainment and careers, and the sociology of aging.

- A. Social Structure and the Life Course
 - B. Social Patterns of Personal Development
 - C. Social Gerontology
 - D. Special Topics in Aging and Life Course Analysis
- One course. *Jackson, O'Rand, or Spenner*

222S, A-G. Proseminars in Comparative and Historical Sociology. (SS) Selected topics in the differentiation and transformation of societies.

- A. Theories of Social Change
 - B. Globalization and Comparative Development
 - C. Societal Transformations and Social Institutions
 - D. Culture, Values, and Ideas
 - E. Social Movements and Political Sociology
 - F. Comparative Social Policies
 - G. Special Topics in Comparative and Historical Sociology
- One course. *Buchmann, Gao, Gereffi, Lin, Simpson, Smith, or Tiryakian*

223S, A-E. Proseminars in Crime, Law, and Deviance. (SS) Selected topics in crime and the institutions of social control.

- A. Theories of Crime Causation
 - B. Human Development and Criminal Careers
 - C. Social Control and the Criminal Justice System
 - D. Sociology of Law
 - E. Special Topics in Crime, Law, and Deviance
- One course. *Land, Simpson, or Wilson*

224S, A-F. Proseminars in Population Studies. (SS) Selected topics.

- A. Population Dynamics
 - B. Mortality, Morbidity, and Epidemiology
 - C. Urbanization and Migration
 - D. Demography of the Labor Force
 - E. Demography of Aging
 - F. Special Topics in Population Studies
- One course. *DiPrete, Land, Manton, O'Rand, Parnell, or Smith*

225S, A-H. Proseminars in Organizations, Markets, and Work. (SS) Selected topics in complex organizations, the labor process, and changing occupations.

- A. Basic Concepts, Theories, and Methods

- B. Organizations and Environments
 - C. Social Psychology of Organizations
 - D. Markets and Market Systems
 - E. Careers and Labor Markets
 - F. Sociology of Work and Industrial Relations
 - G. Special Topics I: Micro Issues
 - H. Special Topics II: Macro Issues
- One course. *DiPrete, Gao, O'Rand, Spenner, or Thornton*

226S, A-G. Proseminars in Social Institutions and Processes. (SS) Selected topics in the sociology of institutions and social and institutional behavior.

- A. Social Psychology
 - B. Social Stratification
 - C. Political Sociology
 - D. Sociology of Religion
 - E. Sociology of Science
 - F. Sociology of Education
 - G. Special Topics in Social Institutions and Processes
- One course. *Staff*

227S, A-D. Proseminars in Medical Sociology. (SS) Selected topics in medical sociology.

- A. Social Structure and Health
- B. Social Behavior and Health
- C. Organization and Financing of Health Care
- D. Special Topics in Medical Sociology (for example, social epidemiology, stress and coping, health and aging)

One course. *George, Gold, Jackson, Lin, or Thornton*

228S, A-F. Proseminars in Stratification, Mobility, and Labor Force Behavior. (SS) Core and special topics in social stratification, including explanations for the existence, amount, and various dimensions of stratification in society; institutions that produce stratification; forces that cause the structure of stratification to vary both over time and across societies; and structures that govern social mobility within and across generations.

- A. Intergenerational Mobility
- B. Social Structure and the Life Course
- C. Social Inequality and the Structure of Poverty
- D. Careers and Labor Markets
- E. Societal Transformation
- F. Special Topics in Stratification and Mobility Research

One course. *Buchmann, DiPrete, Lin, Spenner, or O'Rand*

229S, A-F. Proseminars in Social Psychology. (SS) Selected topics in microsociology and social psychology, including social interaction, decision making, social exchange, group processes, intergroup relations, self and identity, social structure and personality, social networks, and applications in organizations and health care.

- A. Introduction to Social Psychology
- B. Rational Choice and Social Exchange
- C. Sociology of Self and Identity
- D. Group Processes and Intergroup Relations
- E. Experimental Research: A Practicum
- F. Special Topics in Social Psychology

One course. *Cook, George, Jackson, Lin, or Spenner*

234S. Political Economy of Development: Theories of Change in the Third World. (SS) See C-L: Political Science 234S; also C-L: Comparative Area Studies, Cultural Anthropology 234S, and History 234S. One course. *Staff*

282S. Canada. (SS) See C-L: Canadian Studies 282S; also C-L: Comparative Area Studies, Cultural Anthropology 282S, Economics 282S, History 282S, and Political Science 282S. One course. *Thompson or staff*

283S. Seminar in North American Studies. (CZ) See C-L: North American Studies 283S; also C-L: Cultural Anthropology 283S, History 283S, Political Science 285S, Public Policy Studies 282S, and Romance Studies 283S. One course. *Staff*

291. Research Methods in Japanese. (SS) Consent of instructor required. See C-L: Japanese 291; also C-L: Cultural Anthropology 290, History 292, and Political Science 291. One course. *Staff*

298S, 299S. Seminar in Selected Topics. Substantive, theoretical, or methodological topics. One course each. *Staff*

COURSES CURRENTLY UNSCHEDULED

173. Social Conflict and Social Movements. (SS)

188A. The Sociology of Contemporary Spain. (SS)

216. Advanced Methods of Demographic Analysis. (SS)

THE MAJOR

Prerequisite. Sociology 10D or, under exceptional circumstances, an equivalent course (Sociology 11, 49S) with the consent of the director of undergraduate studies.

Major Requirements. Nine courses, eight of which must be at the 100 level or above, including Sociology 132, Sociology 138, and Statistics 110C, and one seminar or independent study in sociology. Only one independent study credit can be applied to the major.

A *Handbook for Sociology Majors*, available in the office of the director of undergraduate studies, describes areas of concentration, the honors program, and the Sociology Union. It also describes the departmental advising system and the interests of the faculty.

THE MINOR

Five minors are offered by the department, as listed below:

Sociology: Comparative Sociology

Requirements. Sociology 110 plus any four of the following: Sociology 126, 142, 156, 171, 179, or 182.

Sociology: Contemporary Social Issues

Requirements. Sociology 117, 149, 150, 151, and 170.

Sociology: Criminology

Requirements. Sociology 11, 119, 120, 122, and 123.

Sociology: Medical Sociology

Requirements. Sociology 112, 123, 162, 163, and 171.

Sociology: Social Inequality

Requirements. Sociology 111, 112, 116, 118, and 165.

Institute of Statistics and Decision Sciences (STA)

Professor West, *Director*; Associate Professor Johnson, *Director of Undergraduate Studies*; Professors Berry, Sacks, and Winkler; Associate Professors Burdick, Lavine, Reckhow, and

Wolpert; Assistant Professors Clyde, Müller, Parmigiani, Stangl, and Vidakovic; Adjunct Professor Smith; Adjunct Assistant Professors Ickstadt and Sanso; Visiting Assistant Professor Higdon

The Institute of Statistics and Decision Sciences coordinates teaching and research in statistics and decision theory at Duke. It offers various courses in basic statistics and advanced mathematical statistics. The research emphasis on statistical decision theory in the institute leads to its offering a variety of courses, at various levels, in statistics and decision sciences. There is no undergraduate major in statistics. The institute maintains and runs a Statistical Consulting Center which provides help on statistical problems and projects for members of the Duke community.

10D. Basic Statistics. (QR) Statistical concepts involved in making inferences, decisions, and predictions from data. Emphasis on applications, not formal technique. Not open to students who have had Political Science 138, Psychology 117, Public Policy Studies 112, Sociology 133, or Statistics 110, 112, 113, 114, or 115. One course. *Staff*

104. Probability. (QR) Prerequisite: Mathematics 103. See C-L: Mathematics 135. One course. *Staff*

110A. Statistics and Data Analysis in the Social Sciences. (QR) Descriptive statistics. Probability and its role in statistical inference. Confidence intervals. Tests of significance. Introduction to linear regression modeling. Not open to students who have had Mathematics 136 or Statistics 110B, 112, 113, 114, 210A, 210B, or 213. One course. *Staff*

110B. Statistics and Data Analysis in Economics. (QR) Descriptive statistics. Probability and its role in statistical inference. Confidence intervals. Tests of significance. Introduction to linear regression modeling. Emphasis on applications in economics. Not open to students who have had Mathematics 136, Statistics 110A, 112, 113, 114, 210A, 210B, or 213. One course. *Staff*

110C. Statistics and Data Analysis in Public Policy and Sociology. (QR) Descriptive statistics. Probability and its role in statistical inference. Contingency tables. Analysis of variance. Correlation. Linear regression. Confidence intervals. Tests of significance. Bayesian methods. Emphasis on applications in public policy and sociology. Not open to students who have had Mathematics 136, Statistics 110A, 110B, 110E, 112, 113, 114, 210A, 210B, or 213. One course. *Staff*

110E. Statistics and Data Analysis in Psychology and Biological Sciences. (QR) Descriptive statistics. Probability and its role in statistical inference. Confidence intervals. Tests of significance. Introduction to linear regression modeling. Emphasis on applications in psychology and biological sciences. Not open to students who have had Mathematics 136, Statistics 110A, 110B, 110C, 112, 113, 114, 210A, 210B, or 213. One course. *Staff*

112S. Introduction to Applied Statistics. (QR) Classical techniques of testing and estimation. Emphasis on applications of the theory to applied problems. Not open to students who have taken Statistics 213 or equivalent. Prerequisite: Mathematics 32 or equivalent, or consent of instructor. One course. *Staff*

113. Probability and Statistics in Engineering. (QR) Introduction to probability, independence, conditional independence, and Bayes' theorem. Discrete and continuous, univariate and multivariate distributions. Linear and nonlinear transformations of random variables. Classical and Bayesian inference, decision theory, and comparison of hypotheses. Experimental design, statistical quality control, and other applications in engineering. Not open to students who have taken Statistics 112 or 213. Prerequisite: Mathematics 103 or equivalent. One course. *Staff*

114. Statistics. (QR) Prerequisites: Mathematics 104 and 135. See C-L: Mathematics 136. One course. *Staff*

191, 192. Independent Study. Directed reading and research. Consent of instructor and director of undergraduate studies required. One course each. *Staff*

205. Probability and Measure Theory. (QR) Introduction to probability spaces, the theory of measure and integration, random variables, and limit theorems. Distribution functions, densities, and characteristic functions; convergence of random variables and of their distributions; uniform integrability and the Lebesgue convergence theorems. Weak and strong laws of large numbers, central limit theorem. Prerequisites: elementary real analysis and elementary probability theory. One course. *Wolpert*

207. Probability. (QR) Not open to students who have taken Mathematics 290. Prerequisite: Mathematics 241 or equivalent. See C-L: Mathematics 287. One course. *Staff*

210A. Statistics and Data Analysis for Policymakers. (QR) Elements of statistical inference and estimation including exploratory data analysis, regression, and analysis of variance. Emphasis on public policy applications. Not open to students who have had Mathematics 136 or Statistics 110A, 110B, 112, 113, 114, 210B, or 213. C-L: Public Policy Studies 222. One course. *Roselius or Stangl*

210B. Statistics and Data Analysis in Biological Science. (QR) Elements of statistical inference and estimation including exploratory data analysis, regression, and analysis of variance. Emphasis on biological science applications. Not open to students who have had Mathematics 136 or Statistics 110A, 110B, 112, 113, 114, 210A, or 213. C-L: Environment 251. One course. *Staff*

213. Introduction to Statistical Methods. (QR) Emphasis on classical techniques of hypothesis testing and point and interval estimation, using the binomial, normal, t, F, and chi square distributions. Not open to students who have had Statistics 114 or Mathematics 136. Prerequisite: Mathematics 103 (may be taken concurrently) or equivalent, or consent of instructor. One course. *Staff*

215. Statistical Inference. (QR) Classical, likelihood, and Bayesian approaches to statistical inference. Foundations of point and interval estimation, and properties of estimators (bias, consistency, efficiency, sufficiency, robustness). Testing: Type I and II errors, power, likelihood ratios; Bayes factors, posterior probabilities of hypotheses. The predictivist perspective. Applications include estimation and testing in normal models, exponential families, regression and one-way ANOVA, contingency tables. Hierarchical normal models; model choice and criticism. Prerequisite: Statistics 213 or coregistration in Statistics 214 or consent of instructor. One course. *Staff*

216. Generalized Linear Models. (QR) Likelihood-based inference in generalized linear models (GLIMs). Multiple linear regression, theory, and practice. Elements of Bayesian analyses of linear models. Theory of likelihood-based inference for GLIMs. Factor variables and cross-classified data arrays. Discrete models: binary regressions and simple contingency tables. Introduction to log-linear models. Data analysis: model fitting, model choice, and residuals-based diagnostics. Prerequisites: Statistics 214 and coregistration in Statistics 215 or equivalent. One course. *Staff*

226. Statistical Decision Theory. (QR) Formulation of decision problems; criteria for optimality: maximum expected utility and minimax. Axiomatic foundations of expected utility; coherence and the axioms of probability (the Dutch Book theorem). Elicitation of probabilities and utilities. The value of information. Estimation and hypothesis testing as decision problems: risk, sufficiency, completeness and admissibility. Stein estimation. Bayes decision functions and their properties. Minimax analysis and improper priors. Decision

theoretic Bayesian experimental design. Combining evidence and group decisions. Prerequisite: Statistics 215 or consent of instructor. One course. *Staff*

242. Applied Regression Analysis. (QR) Linear regression using both graphical and numerical methods. Model construction, critique, and correction using graphical residual analysis. One-way and two-way analysis of variance; introduction to design of experiments. Use of a standard statistical software package. Applications and examples drawn from various sources, emphasizing the biological and environmental sciences. Prerequisite: Statistics 210B or equivalent. C-L: Environment 255. One course. *Staff*

244. Linear Models. (QR) Multiple linear regression and model building. Exploratory data analysis techniques, variable transformations and selection, parameter estimation and interpretation, prediction, Bayesian hierarchical models, Bayes factors and intrinsic Bayes factors for linear models, and Bayesian model averaging. The concepts of linear models from Bayesian and classical viewpoints. Topics in Markov chain Monte Carlo simulation introduced as required. Corequisite: Statistics 213 or equivalent. C-L: Mathematics 217. One course. *Staff*

245. Introduction to Multivariate Statistics. (QR) Multinormal distributions, multivariate general linear model, Hotelling's T^2 statistic, Roy union-intersection principle, principal components, canonical analysis, factor analysis. Not open to students who have taken the former Mathematics 242. Prerequisite: Statistics 244 or equivalent. C-L: Mathematics 218. One course. *Burdick*

253. Applied Stochastic Processes. (QR) Not open to students who have taken Mathematics 240. Prerequisite: Mathematics 135 or equivalent. See C-L: Mathematics 216. One course. *Staff*

273. Numerical Analysis. (QR) Prerequisites: knowledge of an algorithmic programming language, intermediate calculus including some differential equations, and Mathematics 104. See C-L: Computer Science 250; also C-L: Mathematics 221. One course. *Rose or Sun*

282. Optimization Methods. (QR) Optimization techniques useful in decision making. Numerical techniques for nonlinear optimization, with and without constraints; linear and quadratic programming; applications. Other topics, including dynamic programming, optimal control, and stochastic methods, as time permits. Prerequisites: Mathematics 32 and 104 or equivalent, or consent of instructor; knowledge of a computer programming language is helpful but not required. One course. *Wolpert*

290. Statistical Laboratory. (QR) Introduction to statistical thinking, data management and collection, sampling and design, exploratory data analysis, graphical and tabular displays, summarizing data. Introduction to applied work. Computer orientation, statistical packages and operating systems, especially unix on high-speed workstations, and the statistical package S-Plus. Graphics and numerical computing. Examples from various disciplines. One course. *Staff*

293. Special Topics in Statistics. (QR) Advanced topics of current interest. Prerequisite: Statistics 213 or consent of instructor. One course. *Staff*

294. Special Topics in Statistics. (QR) Prerequisite: Statistics 213 or consent of instructor. One course. *Staff*

297. Topics in Probability Theory. (QR) Prerequisite: Mathematics 287 or consent of instructor. See C-L: Mathematics 288. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

30. Introduction to Decision Analysis. (QR)

- 31. Applied Game Theory. (QR)
- 104S. Probability. (QR)
- 115. Statistical Data Analysis in Engineering. (QR)
- 203S. Senior Seminar in Statistics. (QR)
- 214. Probability and Statistical Models. (QR)
- 246. Experimental Design. (QR)

Swahili

For courses in Swahili, see Asian and African Languages and Literature.

University Program in Writing and Rhetoric

Professor of the Practice Gopen, *Director of the Writing Across the University Program*; Assistant Professor of the Practice Hillard, *Director of the First-Year Writing Program*; Lecturer Smith, *Assistant Director of the First-Year Writing Program*; Assistant Professor of the Practice Brett; Lecturer Askounis; Senior Lecturing Fellows DiPietro and Kellogg

The first-year writing requirement may be fulfilled by successfully completing University Writing Course 4, 5, 6, 7, or 8, each of which involves expository composition and regular individual conferences. The requirement must be fulfilled in a student's first semester of residence at Duke. Despite the distinction in course titles, all these courses deal with the same core concerns and have the same objective: they are intended to help students of all abilities to a greater understanding of the language and thereby to a greater control of their thinking process.

The University Program in Writing and Rhetoric also coordinates a series of courses offered in several departments in which writing is a key component of learning. In 1997 these include the 20S-series courses in cultural anthropology, English, history, literature, music, political science, and religion.

4. Workshop in Rhetoric (4). A collaborative workshop that attends to the complexities of the communication process between writers and readers. Designed for those who feel less confident than they would like about their writing. One course. *Staff*

5. Workshop in Rhetoric (5). Like University Writing Course 4, this course is a collaborative workshop that attends to the complexities of the communication process between writers and readers. Designed for those who feel relatively confident about their writing. One course. *Staff*

7. Workshop in Rhetoric (7): The FOCUS Program. A collaborative workshop that attends to the complexities of the communication process between writers and readers. Designed to coordinate with the subject matter of the various FOCUS Programs. One course. *Staff*

8. Workshop in Rhetoric (8). This course, which covers the rhetorical principles available in University Writing Course 4, 5, 6, and 7, is offered only in the spring. Not open to students who have passed 4, 5, 6, or 7. One course. *Staff*

12. Intermediate Composition. For transfer students and continuing education students only. The approach to evaluating written language that is taught in the University Writing Program. Not open to students who have taken University Writing Course 4, 5, 6, 7, or 8. One course. *Staff*

112. Scientific Writing. Advanced composition for those who will be choosing careers in science. Techniques for presenting complicated data and complex thought in clear and persuasive prose. Readings in the history, philosophy, or theory of science. Weekly writing tasks. Prerequisite: University Writing Course 4, 5, 6, 7, or 12. C-L: English 116A. One course. *Staff*

117S. Advanced Composition I. Emphasis on the connections between substance and structure; revision techniques and invitational procedures. Tailored to the level, needs, and interests of students who enroll. Prerequisite: previous University Writing Course or consent of the director of the Writing Across the University Program. C-L: English 117A. One course. *Staff*

118S. Advanced Composition II. Emphasis on preparing prose for publication, in whatever fields interest the participating students. Prerequisite: successful completion of University Writing Course 117S. C-L: English 117B. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

3. Introductory Composition and Rhetoric

6. Interpretive Writing

Women's Studies (WST)

Professor of the Practice and Adjunct Professor J. O'Barr, *Director*; Professor C. Meyers, *Associate Director*; Associate Professor Sieburth; Assistant Professor of the Practice Rudy; Research Professor Giddings

A major or minor is available in this program.

The Program in Women's Studies provides for students an understanding of the forces that shape the position of women and men in society and develops an appreciation for knowledge about gender. Women's studies brings together faculty and students from across the university who are encouraged to question and reinterpret existing bodies of knowledge and to include women's perspectives and contributions in this critical approach.

The courses listed below are offered by the Women's Studies Program (WST) or by other academic departments and programs. Both are used to fulfill the requirements for the major or minor. For a more detailed description of each course, consult the Women's Studies Program Office or the appropriate department or program office.

REGULARLY SCHEDULED COURSES IN WOMEN'S STUDIES

Women's Studies Courses (WST)

60. Gender, Social Policy, and Politics. (SS) A study of the social context of gender roles and the varying political perspectives used to analyze them. Emphasis on contemporary issues and proposed policy solutions to them. One course. *Staff*

103. An Introduction to Women's Studies. (SS) A course about women, gender, and feminist theories in the United States, using a variety of disciplinary approaches to analyze women's experiences, the women's movement, and women's studies. One course. *J. O'Barr and staff*

150. Selected Topics in Women's Studies. Topics vary, focusing on interdisciplinary work arising from feminist scholarship. One course. *Staff*

150S. Selected Topics in Women's Studies. Seminar version of Women's Studies 150. One course. *Staff*

191, 192. Independent Study. Consent of instructor and program director required. One course each. *Staff*

191A, 192A. Independent Study. Consent of instructor and program director required. One and one-half courses each. *Staff*

195S. Senior Seminar in Women's Studies. Original research project in feminist scholarship, applying multidisciplinary perspectives. For Women's Studies Program majors and minors. Consent of instructor required. One course. *Staff*

Departmental Courses

Asian and African Languages and Literature 149. Women and Modernity: Gender Issues in Twentieth-Century Chinese Literature and Film. *Torgeson*

Asian and African Languages and Literature 171: Women and Creativity. *Staff*

Asian and African Languages and Literature 173S. Women in Arab Literature. *Cooke*

Asian and African Languages and Literature 188. Politics of Women's Liberation in the Arab World. *Staff*

Asian and African Languages and Literature 190. Women in Islam: Fact and Fiction. *Cooke*

Asian and African Languages and Literature 195. Women in the Middle East. *Cooke*

Classical Studies 104S. Women in the Ancient World. *Boatwright*

Classical Studies 195S, 196S. Sex Roles in Antiquity. *Boatwright*

Cultural Anthropology 103. Sexuality and Culture in America. *Luttrell*

Cultural Anthropology 113. Gender and Culture. *Allison, Luttrell, Quinn, or Silverblatt*

Cultural Anthropology 115S. Anthropology of Gender: Special Topics. *Allison, Luttrell, Quinn, Silverblatt, or Starn*

Cultural Anthropology 142. Sexuality in Global Perspective. *Luttrell*

Cultural Anthropology 215S. The Anthropology of Gender: Theoretical Issues. *Allison, Luttrell, Quinn, Silverblatt, or Starn*

Cultural Anthropology 216S. Gender, Race, and Class. *Luttrell*

Drama 107S. Twentieth-Century Women Playwrights. *McAuliffe*

English 109S. Topics in Women's Poetry. *Pope*

English 131. Margaret Atwood. *A. Davidson*

English 169S. Contemporary American Women Poets. *Pope*

English 170. Writings by Women of Color. *Willis*

English 179S. Studies in Women's Fiction. *Pope*

English 269. American Women Writers. *C. Davidson, Pope, or Tompkins*

French 147. Seventeenth Century Fictions of Women. *Longino*

French 159. Topics in Sexuality and Gender Studies. *Staff*

German 124S. Contemporary German Women Writers. *Staff*

German 254S. Literature by Women. *Rasmussen*

History 169A, 169B. The Social History of American Women. *Hewitt*

History 171A. History of Women in Early Modern Europe. *Neuschel*

History 190. The History of Women in Science and Medicine. *Green*

History 195S.36. Women, Family, and the State. *Y. Miller*

History 195S.41. Women in Medieval Society. *Green*

History 195S.50. History of Feminism in the U.S. *Hewitt*

History 195S.66. Sex, Class, and Race in America. *Hewitt*

Italian 105. Italian Women Writers. *Fimucci*

Literature 121. Special Topics in Women in Literature. *Staff*

Literature 123. Special Topics in Women Writers. *Staff*

Literature 124. Special Topics in Homosexualities in Literature. *Staff*

Literature 125. Special Topics in Gender and Sexuality. *Staff*

Philosophy 122. Philosophical Issues in Feminism. *Staff*

Philosophy 203S. Contemporary Ethical Theories. *Flanagan, Golding, or MacIntyre*

Political Science 140. Feminist Political Theory. *Staff*

Psychology 106. Psychology of Women. *Fischer, Hamilton, or Roth*

Psychology 180S. Advanced Topics in the Psychology of Gender. *Fischer, Hamilton, or Roth*

Public Policy Studies 140. Women as Leaders. *Kofodimos*

Religion 109. Women in the Biblical Tradition: Image and Role. *C. Meyers*

Religion 125. Women and Sexuality in the Christian Tradition. *Clark*

Religion 138. Women and Religion in America. *Joyce*

Religion 253. Feminist Theory and the Study of Christianity. *Clark and McClintock-Fulkerson*

Religion 262. Writing Women's Lives: Gender and Religion in America. *Joyce*

Russian 169/269. Women and Russian Literature. *Gheith*

Russian 174. Gender and Language. *Andrews*

Russian 214. Gender, Nationalities, and Russian Literary Tradition. *Gheith*

Sociology 118. Sex, Gender, and Society. *Buchmann or O'Rand*

Sociology 149. Sexuality and Society. *Staff*

Sociology 188B, S. Colonialism, Ethnicity, and Gender in Postrevolutionary Bolivia. (Taught in Spanish in Bolivia.) *Staff*

Spanish 141S. Spanish-American Women Writers. *Staff*

Spanish 177S. Women Writers of Spain. *Staff*

Recommended Course Offerings

The courses below are taught by affiliated faculty and are recommended by the Women's Studies Program as complementary and relevant. With a program advisor's permission, up to two of these courses may be used to fulfill requirements for the major and one course may be used to fulfill the requirements for the minor.

- Art 167. Twentieth-Century Art, 1900-1945: The Avant-garde and Modernism. *Stiles*
Art 168. Art since 1945: Modernism and Postmodernism. *Stiles*
Art 179. The History of Performance Art. *Stiles*
Art 187. Surrealism. *Stiles*
Cultural Anthropology 110. Advertising and Society: Global Perspectives. *Luttrell, O'Barr, J. Smith, or Wilson*
Economics 208S. Economics of the Family. *McElroy*
English 156. History of Mass Culture in the United States. *Gaines, Radway, Tompkins, Torgomnick, or Willis*
English 163. Twentieth-Century American Poetry. *Pope*
English 179S. Repairing the Continent. *A. Davidson*
English 187. Melodrama and Soap Opera. *Gaines*
English 189S. Sexualities in Film and Literature. *Clum, Gaines, or Moses*
French 166, 167. Contemporary French Life and Thought. *Kaplan*
History 107A. Tudor/Stuart Britain. *Herrup*
History 107B. Modern Britain. *Thorne*
History 115A. History of Africa: From Antiquity to Early Modern Times. *El Hamel or Ewald*
History 115B. History of Africa: From Early Modern Times to Independence. *El Hamel or Ewald*
History 117. Early Modern Europe. *Neuschel*
History 160. The United States from the New Deal to the Present. *Chafe*
Religion 40. Judaism. *Staff*
Religion 234. Early Christian Asceticism. *Clark*
Sociology 106. Social Psychology. *Costanzo, Fischer, George, or staff*
Sociology 111. Social Inequality: An International Perspective. *DiPrete or O'Rand*
Sociology 150. The Changing American Family. *Simpson*
Sociology 161. Adulthood and Aging. *George, Gold, or O'Rand*
Sociology 163. Aging and Health. *George or Gold*
Sociology 165. Occupations, Professions, and Careers. *O'Rand, Simpson, or Spenner*

House Courses. The Women's Studies Program regularly sponsors house courses on topics of interest to students in the program. While house courses do not officially count toward the major or the minor, students are strongly encouraged to consider them as valuable supplements to full-credit courses. Lists of the house courses being offered are available in the program office at the beginning of each semester.

THE MAJOR

To major in women's studies, a student must take a minimum of ten courses. Introduction to Women's Studies (WST 103) and a senior seminar (WST 195S) or their equivalents are required for the major. Additionally, in order to place the study of women, gender, and feminist theories in a global context, students must choose, in consultation with their advisors, at least one course that focuses primarily on a non-United States and nonwestern European topic or culture. Such courses may include modern and/or historical perspectives on a single culture or number of cultures.

At least seven of these courses must come from courses listed in women's studies either designated as WST or cross-listed with other departments. Up to three courses may be in the following forms: (1) courses from the Recommended Course Offerings list, (2) independent studies, or (3) one-time course offerings not appearing on regular lists, but which are complementary and relevant to a student's course of study. Such courses must be approved by a program advisor in order to be credited toward the major.

As an interdisciplinary major, the women's studies major is organized around a set of guidelines rather than a sequence of required courses. The guidelines are designed to facilitate three distinct yet overlapping levels of inquiry into women's experiences and gender analysis: critique, comparison, and connection. Within the requirements for the

major, a student has a great deal of flexibility in designing the substantive focus of the major. To fulfill the major, students must take at least two courses that focus on critique, two that are primarily comparative in nature, and two that emphasize connection. Additional courses may fall under any of these guidelines.

Acquiring critical perspectives is a process involving three steps. The first is to produce new knowledge. In the light of that new knowledge, the second step is to modify the frameworks of knowledge that already exist. The third step is to correct assumptions and biases that prove to be incorrect in the light of this more complete knowledge. Critical perspectives are honed in the women's studies major through courses which emphasize the historical omissions, factual errors, and misrepresentations of women's experiences.

Comparative perspectives are pursued in at least two ways: within and across disciplines and within and across cultures. By comparing how feminist analysis operates in two or more disciplines, students will be able to identify and analyze the ways in which the methods of academic inquiry differ by discipline and what makes an analysis feminist. By comparing cultural contexts, students will be able to identify and analyze women's and men's diverse experiences.

The emphasis on connections is one of the distinguishing features of the women's studies major. Students are continually encouraged to make connections between ideas and experiences, between past knowledge and future possibilities, between cultural and policy issues and personal decisions, and between women's studies and other academic study. These connections are fostered in senior seminars and independent studies, and through internships or other supervised practice, among other possibilities.

Individual courses will often fulfill more than one of these guidelines. Students will be expected to articulate the ways in which an individual course and particular configurations of courses have facilitated their pursuit of critique, comparison, and connection. Students are thus responsible for designing their own major in close consultation with program advisors. This allows students to explore the topics which most interest them; the flexible nature of the curricular requirements also enables students to take advantage of the one-time course offerings and visiting scholars in constructing personalized programs.

In planning the major, each student works with a faculty advisor to accomplish three goals. The first is to develop a coherent plan of study through which the student pursues a theme or concentration within coursework; that theme or concentration may emphasize breadth or depth in subject matter. The second is to insure that a student balances introductory and advanced courses as they are available from other departments. The third is to fulfill the three guidelines of critique, comparison, and connection described above.

Students may complete a first or second major or a minor in women's studies.

Advising

Each year, several faculty affiliated with the women's studies program serve as advisors for students majoring in women's studies. Majors are paired with faculty advisors on the basis of students' general areas of interest. Students majoring in women's studies are encouraged to seek out and work with any of the women's studies faculty in addition to their primary faculty advisor.

Honors/Distinction

Qualified students earning a major may be eligible for graduation with distinction in women's studies. More detailed guidelines are available in the program office. Students interested in being considered for distinction should contact the program office no later than the spring of their junior year.

THE MINOR

Requirements. The requirements for the minor reflect the ideas shaping the major. A student must complete five courses, including Women's Studies 103 or its equivalent. The

four additional courses must come from courses listed in Women's Studies, at least two of which must be at the 100 level. At least one course must be a 100-level seminar. Following the same guidelines of critique, comparison, and connection, students must take at least one course that focuses on critique, one that is comparative in nature, and one that emphasizes connection.

In addition to offering courses, and a major and minor representing a focus in women's studies, the program sponsors lectures, films, discussions, conferences, internships, and work-study opportunities. Additional information on courses, the women's studies major or certificate, and other opportunities in women's studies is available at the Women's Studies Program Office, 210 East Duke Building.

Writing

See University Program in Writing and Rhetoric.

Zoology (ZOO)

Professor Rausher, *Chair*; Professors Barber, Brandon, Forward, Gillham, Klopfer, Laurie, Livingstone, McClay, Nicklas, H. Nijhout, Simons, Staddon, Terborgh, Tucker, Uyenoyama, Vogel, Wainwright, and Ward; Associate Professors Nowicki, Rittschof, Roth, K. Smith, and Van Schaik; Assistant Professors Crenshaw, Cunningham, Fehon, McShea, Morris, and Wilson; Professors Emeriti Bailey, Bookhout, Fluke, Gregg, and Schmidt-Nielsen; Associate Professor of the Practice Motten; Assistant Professor of the Practice Mercer; Research Assistant Professors Einstein, Roach, and Smyth; Adjunct Professor Schmidt-Koenig; Adjunct Associate Professor M. Nijhout; Instructor Lincoln

See Biology for a description of the major and the list of courses taught by the zoology faculty.

School of Engineering

Professor Dowell, *Dean*; Professor Shepard, *Associate Dean*

ENGINEERING

(INTERDEPARTMENTAL) (EGR)

21. Energy Technology and the Environment. Energy production and use has had an increasing impact on the global environment, especially via a concomitant increase in the level of carbon dioxide in the atmosphere. Both new and traditional energy technologies will be analyzed, together with projected environmental impacts of these technologies. Open only to first-or second-year engineering majors, or all nonengineering majors. One course. *Cocks*

24L. Introduction to Environmental Engineering. Materials and energy balances applied to environmental engineering problems. Water pollution control, applied ecology, air quality management, solid and hazardous waste control. Environmental ethics. Prerequisite: Chemistry 11L. One course. *Vesilind*

25L. Introduction to Structural Engineering. An introduction to engineering and the engineering method through a wide variety of historical and modern case studies, ranging from unique structures like bridges to mass produced objects like pencils. One course. *Petroski*

49S. First-Year Seminar. Topics vary each semester offered. One course. *Staff*

50. Introduction to Numerical Computing. Introduction to the use of computers in the solution of engineering and scientific problems. Systematic methods for algorithm development and coding in a higher-level computer language. Application of selected numerical methods. Not open to students who have matriculated at Duke. One course. *Staff*

53L. Computational Methods in Engineering. Introduction to computer methods and algorithms for analysis and solution of engineering problems using numerical methods in a workstation environment. Topics include; numerical integration, roots of equations, simultaneous equation solving, finite difference methods, matrix analysis, linear programming, dynamic programming, and heuristic solutions used in engineering practice. This course includes instruction in the C programming language and does not require any prior knowledge of computer programming. One course. *Staff*

54L. Simulations in C++. Students with previous experience in the C programming language will progress to C++ developing interactive computer simulations using *Reality.c++*, a library that includes user interface, graphical objects (spaceships, planets, etc.) and standardized functions for Newtonian mechanics. The course will build on Engineering 53L, introducing object-oriented programming, linked and inherited structures, and aspects of computational mathematics such as stability and computational error. Students will develop projects (in the context of video games) that incorporate models of orbital mechanics, collision detection, strategy, etc. Prerequisite: Engineering 53L or Computer Science 6 or Computer Science 100E. One course. *Stetten*

75L. Mechanics of Solids. Analysis of force systems and their equilibria as applied to engineering systems. Stresses and strains in deformable bodies; mechanical behavior of materials; applications of principles to static problems of beams, torsion members, and columns. Selected laboratory work. Prerequisites: Mathematics 32 and Physics 51L. One course. *Gavin, Hueckel, Laursen, B. Utku, or J. F. Wilson*

83L. Structure and Properties of Solids. Introduction to materials science and engineering, emphasizing the relationships between the structure of a solid and its properties. Atomic and molecular origins of electrical, mechanical, and chemical behavior are treated in some detail for metals, alloys, polymers, ceramics, glasses, and composite materials. Prerequisites: Chemistry 11L and Mathematics 31 or 33. One course. *Cocks, Eom, Gösele, Jones, Needham, Shepard, or Tan*

108S. Professional Ethics. Case study approach used to introduce professional ethics. Topics include moral development, confidentiality, risk and safety, social responsibility, fraud and malpractice, legal aspects of professionalism, and environmental ethics. The capstone course for students completing the certificate in the Program in Science, Technology, and Human Values. C-L: Science, Technology & Human Values 108S. One course. *Vesilind*

115. Engineering Systems Optimization. Introduction to mathematical optimization, engineering economic analysis, and other decision analysis tools used to evaluate and design engineering systems. Application of linear and nonlinear programming, dynamic programming, expert systems, simulation and heuristic methods to engineering systems design problems. Applications discussed include: production plant scheduling, water resources planning, design and analysis, vehicle routing, resource allocation, repair and rehabilitation scheduling and economic analysis of engineering design alternatives. Corequisite: Mathematics 111. One course. *Pas or Peirce*

123L. Dynamics. Principles of dynamics of particles, rigid bodies, and selected nonrigid systems with emphasis on engineering applications. Kinematic and kinetic analysis of structural and machine elements in a plane and in space using graphical, computer, and analytical vector techniques. Absolute and relative motion analysis. Work-energy; impact and impulse-momentum. Laboratory experiments. Prerequisites: Engineering 75L and Mathematics 103 or consent of instructor. One course. *Knight, Virgin, or Wright*

150L. Engineering Communication. Principles of written and verbal technical communication; graphics, mapping, surveying and engineering drawing. Computer graphics, two- and three-dimensional transformations, hidden-surface and hidden-line algorithms, and

computer aided design. Prerequisite: Engineering 53L or equivalent. One course. *Pas and Vesilind*

165. Special Topics in Engineering. Study arranged on special engineering topics in which the faculty have particular interest and competence as a result of research or professional activities. Consent of instructor(s) required. Quarter course, half course, or one course. Variable credit. *Staff*

171. Total Quality Systems. An interdisciplinary approach to principles and practice in the applications of total quality concepts to engineering operations and business managements; practice in using tools of statistical process control; practice in using quality tools of management and operations; principles of continuous quality improvement; definitions and applications of Total Quality Management (TQM); case studies; personal effectiveness habits and social styles; assignments and projects in team building using tools learned, communication; group problem solving; practice in professional verbal and written technical communications. Prerequisite: junior or senior standing. One course. *Staff*

175. Aesthetics, Design, and Culture. An examination of the role of aesthetics, both as a goal and as a tool, in a culture which is increasingly dependent on technology. Visual thinking, perceptual awareness, experiential learning, conceptual modeling, and design will be explored in terms of changes in sensory environment. Design problems will be formulated and analyzed through individual and group design projects. One course. *Pearsall*

183, 184. Projects in Engineering. Courses in which engineering projects of an interdisciplinary nature are undertaken. The projects must have engineering relevance in the sense of undertaking to meet human need through a disciplined approach under the guidance of a member of the engineering faculty. Consent of instructor required. One course each. *Staff*

221. Computational Linear Algebra. Linear vector spaces of real and complex n -tuples, norms, metrics, inner-products, basis vectors, rank and dimensionality; matrices as linear maps, rank and nullity; particular and general solutions of $Ax=b$; factorization of matrices by successive transformations; solution of $Ax=b$ by direct and iterative methods; special and general eigenvalue problems; diagonalization and tridiagonalization by similarity transformations; power methods; and computational complexities, storage requirements, convergence characteristics, error propagation, and the mathematical basis of the studied algorithms. Prerequisites: Mathematics 111 or equivalent, and knowledge of any algorithmic programming language. One course. *S. Utku*

COURSES CURRENTLY UNSCHEDULED

23. Principles and Practices in Engineering Economics

135. Continuum Mechanics

151. Computer Simulations in Engineering

170. Forecasting Techniques

172A. Contemporary Science: Issues and Challenges

172B. Contemporary Technology: Issues and Challenges

174. Technology Assessment and Social Choice

187. History of Nuclear Energy: Civilian Applications

188. History of Nuclear Energy: Military Applications

222. Computer Solutions of Ordinary and Partial Differential Equations

Biomedical Engineering (BME)

Professor Barr, *Chair*; Associate Professor Truskey, *Director of Undergraduate Studies*; Professors Anderson, Floyd, Hammond, Hochmuth, Jaszczak, Johnson, Katz, Lieberman, McElhaney, Nolte, Smith, Strohbehn, von Ramm, and Wolbarsht; Associate Professors Burdick, Glower, Massoud, Needham, Reichert, and Trahey; Assistant Professors Chilkoti, Collins, Guilak,

Henriquez, Krassowska, Myers, Setton, Vaslef, Wolf, and Yuan; Professors Emeriti Clark and Plonsey; Associate Research Professors Lindner and Pasipoularides; Assistant Research Professors Bohs, Dunmire, Hales, Henderson, Lobach, Nightingale, Rasmusson, M. Smith, Stetten, and Walker; Adjunct Professors Ideker, Neuman, and W. Smith; Adjunct Associate Professors Cooper and Loeb; Adjunct Assistant Professors Black and Cartee

A major is available in this department. The biomedical engineering program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Biomedical engineering is the discipline in which the physical, mathematical, and engineering sciences and associated technology are applied to biology and medicine. Contributions range from computer modeling and simulation of physiological systems through development of medical instrumentation and experimental research to solutions of practical clinical problems. The goal of the Biomedical Engineering program is to prepare students for professional employment, for graduate work in engineering, or for entrance into medical school. To achieve this goal, the program is flexible so that electives can be chosen to meet the respective requirements of the direction chosen by the student.

The undergraduate and graduate programs are complemented by the wide range of ongoing research activities within the department. Biomedical engineering in cardiac electrophysiology involves the use of large-scale computer modeling, scientific visualization, and experimental data acquisition of electrical activity of the heart and heart tissue, to increase basic understanding of normal and abnormal behavior. Other projects involve the study of the effects of externally applied electric fields and radio frequency energy on activity in excitable tissue. Design experience is developed and integrated throughout the curriculum and includes a capstone design course, BME 164. Many students gain valuable design experience in the course of independent student projects within the research laboratories and programs of the BME department.

The ultrasound imaging and transducer laboratories are directed toward new signal and image processing techniques, new system architecture and transducer designs to develop novel imaging methods and improve image quality and spatial resolution. The laboratories are equipped with a variety of state-of-the-art ultrasound imaging instruments, electronics and transducer fabrication tools, acoustic and transducer modeling software as well as video and display hardware.

The medical imaging group studies the physics of various modalities including x-ray, SPECT and MRI and develops new computer-aided methods for processing, enhancing, and analyzing images.

The biomechanics laboratories use advanced experimental test facilities, data acquisition technologies, computer simulations and theoretical modeling in the study of cells, tissues, and biological structures. The mechanisms of injury, aging, degeneration, and mechanical signal transduction are studied in a variety of biological systems, including biological fluids, the cervical and lumbar spines, diarthrodial joints, and the heart.

Cell and biosurface engineering is concerned with the regulation of the external and internal cellular environment of the cell for control of biosynthesis and degradation activities, as well as determination of the factors responsible for differentiation of cells into tissues with varying functional requirements. The groups in this program investigate biomaterials, material property characterizations, surface modifications, cell cultures, and the mechanics of biofluids, tissues, and cells. Applications include the development of novel biosensors and micro/nanocarrier drug delivery systems, new techniques for enhanced biological transport, and improved techniques for stimulated repair or inhibited degradation of biological tissues.

Work in medical informatics focuses on the creation and dissemination of health care data and related knowledge. Areas of investigation include networking, database structures, query languages, workstation design and the development of data interchange standards.

Instruction in all these areas is offered at the undergraduate as well as graduate and postdoctoral levels, and opportunities for undergraduate student research are available in most of the biomedical engineering laboratories.

7. Membranes. An introduction to the elementary properties of membranes, both electrical and mechanical from a mathematical perspective, with some computer exercises. Prerequisite: limited to freshmen who are prospective biomedical engineering majors. One course. *Barr or Henriquez*

8. Biomedical Device Design. An introduction to the origin and characteristics of biologic signals and the features of biomedical systems and devices, from sensor to display/output. Concepts of analog vs. discrete signals, simple detection schemes, sampling, data reduction, filtering, visualization, and imaging techniques are presented. The course emphasizes team project and system design. Prerequisite: Engineering 053L or equivalent; limited to freshmen. One course. *Henriquez*

83L. Introduction to Biomaterials. The principles of materials science and engineering with particular attention to topics most relevant to biomedical engineering. The structure-property relationships of metals, ceramics, polymers, and composites as well as skin, bone, cartilage, ligament, and vasculature; extensive treatment of the properties unique to materials' surfaces. Behavior of materials in the physiological environment. Fall only. Prerequisites: Chemistry 11L and 12L; corequisite: Physics 51L. One course. *Chilkoti or Reichert*

101L. Electrophysiology. The electrophysiology of excitable cells from a quantitative perspective. Topics include the ionic basis of action potentials, the Hodgkin-Huxley model, impulse propagation, source-field relationships, and an introduction to functional electrical stimulation. Prerequisites: Biomedical Engineering 163L or Electrical Engineering 62L, and Mathematics 111. One course. *Barr, Henriquez, or Krassowska*

110L. Introductory Biomechanics. This course is designed to give students in Biomedical Engineering basic training in statics, dynamics, solid mechanics, and mechanical design with applications to the human body. Areas of focus include the determination of the state of stress and strain, experimental measurement in biomechanical systems, mechanical and biomechanical failure criterion, human tolerance, and injury risk. Prerequisites: Mathematics 32 and Physics 51L. One course. *McElhaney, Myers, or Nightingale*

145. Classical Thermodynamics. Thermodynamic properties and thermodynamic state. Exchange of heat and work in quasi-equilibrium processes. Chemical and phase equilibria of multicomponent mixtures. Prerequisite: junior standing. One course. *Setton, Truskey, or Yuan*

155. Safety of Medical Devices. Engineering analysis of the safety of medical devices such as prosthetic heart valves, silicon breast implants, medical imaging, and cardiac pacemakers. Engineering performance standards and US FDA requirements for clinical trials for selected medical devices such as medical diagnostic ultrasound, surgical lasers, and prosthetic heart valves. Students will prepare a mock application for FDA premarket approval to demonstrate safety of a selected medical device. Prerequisite: sophomore standing; corequisite: Physics 52L or equivalent. One course. *S. Smith*

163L, 164L. Biomedical Electronics and Measurements. A study of the basic principles of biomedical electronics and measurements with emphasis on the operational performance and selection of transducers, instruments, and systems for biomedical data acquisition and processing. Selected laboratory work emphasizes the measurements of specific physiological events. Prerequisite: Electrical Engineering 61L. One course each. *S. Smith, Trahey, von Ramm, or Wolf*

171. Signals and Systems. Convolution, deconvolution, Fourier series, Fourier transform, sampling, and the Laplace transform. Continuous and discrete formulations with emphasis on computational and simulation aspects and selected biomedical examples. One course. *Krassowska*

191, 192. Projects in Biomedical Engineering. For juniors or seniors who express a desire for such work and who have shown aptitude for research in one area of biomedical engineering. Half course to two courses. Variable credit. *Staff*

193, 194, 195. Projects in Cardiovascular Biomedical Engineering. Projects in emerging cardiovascular technologies. Primarily for Engineering Research Center fellows who express a desire for and who have shown aptitude for research in emerging cardiovascular technologies. Consent of instructor required. One course each. *Staff*

201L. Electrophysiology. The electrophysiology of excitable cells from a quantitative perspective. Topics include the ionic basis of action potentials, the Hodgkin-Huxley model, impulse propagation, source-field relationships, and an introduction to functional electrical stimulation. Students choose a relevant topic area for detailed study and report. Not open to students who have taken Biomedical Engineering 101L or equivalent. 3 units; 4 units with laboratory. One course. *Barr or Henriquez*

204. Measurement and Control of Cardiac Electrical Events. Design of biomedical devices for cardiac application based on a review of theoretical and experimental results from cardiac electrophysiology. Evaluation of the underlying cardiac events using computer simulations. Examination of electrodes, amplifiers, pacemakers, and related computer apparatus. Construction of selected examples. Prerequisites: Biomedical Engineering 101L and 163L or equivalents. One course. *Wolf*

205L. Microprocessors and Digital Instruments. Design of microcomputer-based devices including both hardware and software considerations of system design. Primary emphasis on hardware aspects, including a progression through initial design, prototype construction in the laboratory, testing of prototypes to locate and correct faults, and final design evaluation. Evaluation includes examination of complexity, reliability, and cost. Design and construction oriented toward biomedical devices or instruments that include dedicated microcomputers, usually operating in real time. Prerequisites: Biomedical Engineering 163L, 164L and Engineering 53L or equivalents. One course. *Hammond*

207. Transport Phenomena in Biological Systems. An introduction to the modeling of complex biological systems using principles of transport phenomena and biochemical kinetics. Topics include the conservation of mass and momentum using differential and integral balances; rheology of Newtonian and non-Newtonian fluids; steady and transient diffusion in reacting systems; dimensional analysis; homogeneous versus heterogeneous reaction systems. Biomedical and biotechnological applications are discussed. C-L: Civil Engineering 207 and Mechanical Engineering 207. One course. *Katz, Truskey, or Yuan*

208. Theoretical and Applied Polymer Science. See C-L: Mechanical Engineering 211. One course. *Pearsall*

211. Theoretical Electrophysiology. Advanced topics on the electrophysiological behavior of nerve and striated muscle. Source-field models for single-fiber and fiber bundles lying in a volume conductor. Forward and inverse models for EMG and ENG. Bidomain model. Model and simulation for stimulation of single-fiber and fiber bundle. Laboratory exercises based on computer simulation, with emphasis on quantitative behavior and design. Readings from original literature. Prerequisite: Biomedical Engineering 101L or 201L or equivalent. One course. *Barr or Krassowska*

212. Theoretical Electrocardiography. Electrophysiological behavior of cardiac muscle. Emphasis on quantitative study of cardiac tissue with respect to propagation and the evaluation of sources. Effect of junctions, inhomogeneities, anisotropy, and presence of unbounded extracellular space. Bidomain models. Study of models of arrhythmia, fibrillation, and defibrillation. Electrocardiographic models and forward simulations. Laboratory exercises based on computer simulation, with emphasis on quantitative behavior and design. Readings from original literature. Prerequisite: Biomedical Engineering 101L or 201L or equivalent. One course. *Barr*

215. Biomedical Materials and Artificial Organs. Chemical structures, processing methods, evaluation procedures, and regulations for materials used in biomedical applications. Applications include implant materials, components of ex vivo circuits, and cosmetic prostheses. Primary emphasis on polymer-based materials and on optimization of parameters of materials which determine their utility in applications such as artificial kidney membranes and artificial arteries. Prerequisite: Biomedical Engineering 83L, Chemistry 151L or Engineering 83L or consent of instructor. C-L: Mechanical Engineering 215. One course. *Reichert*

216. Transport Phenomena in Cells and Organs. Applications of the principles of mass and momentum transport to the analysis of selected processes of biomedical and biotechnological interest. Emphasis on the development and critical analysis of models of the particular transport process. Topics include: reaction-diffusion processes, transport in natural and artificial membranes, dynamics of blood flow, pharmacokinetics, receptor-mediated processes and macromolecular transport, normal and neoplastic tissue. Prerequisite: Biomedical Engineering 207 or equivalent. One course. *Truskey*

220. Introduction to Biomolecular Engineering. Structure of biological macromolecules, recombinant DNA techniques, principles of and techniques to study protein structure-function. Discussion of biomolecular design and engineering from the research literature. Linked laboratory assignments to alter protein structure at the genetic level. Expression, purification, and ligand-binding studies of protein function. Consent of instructor required. One course. *Chilkoti*

222. Principles of Ultrasound Imaging. Propagation, reflection, refraction, and diffraction of acoustic waves in biologic media. Topics include geometric optics, physical optics, attenuation, and image quality parameters such as signal-to-noise ratio, dynamic range, and resolution. Emphasis is placed on the design and analysis of medical ultrasound imaging systems. Prerequisites: Mathematics 111 and Physics 52L. One course. *von Ramm*

228. Laboratory in Cellular and Biosurface Engineering. Introduction to common experimental and theoretical methodologies in cellular and biosurface engineering. Experiments may include determination of protein and peptide diffusion coefficients in alginate beads, hybridoma cell culture and antibody production, determination of the strength of cell adhesion, characterization of cell adhesion or protein adsorption by total internal reflection fluorescence, and Newtonian and non-Newtonian rheology. Laboratory exercises are supplemented by lectures on experiment design, data analysis, and interpretation. One course. *Truskey*

229. Tissue Mechanics. Introduction to conservation laws and thermodynamic principles of continuum mechanics with application to tissues of the musculoskeletal and cardiovascular systems. Constitutive equations for hyperelastic solids and multiphase viscoelastic materials using mixture theory formulation. Emphasis on the application of these constitutive formulations to determination of stress and strain fields in equilibrium and transient deformations of calcified tissues (for example, cortical and trabecular bone), soft tissues (for example, ligament, cartilage, cornea, intervertebral disc, left ventricle, aorta), and biological fluids (for example, mucus, synovial fluid, polymer solutions). Tensor fields and indicial

notation. Prerequisites: Biomedical Engineering 110L or Engineering 75L or equivalent, and Mathematics 111 or equivalent. One course. *Setton*

231. Intermediate Biomechanics. Biomechanics of hard and soft tissues: nonlinear viscoelastic behavior of tendon and ligament; poroelastic behavior of cartilage and meniscus; continuum modeling of bone. Emphasis will be placed on experimental techniques used to evaluate these tissues. Student seminars on topics in applied biomechanics will be included. Prerequisites: Biomedical Engineering 110L or Engineering 75L or equivalent, and Biomedical Engineering 83L or Engineering 83L or equivalent. One course. *Myers*

232L. Biomedical Instrumentation. A study of the basic principles of biomedical electronics and measurements with emphasis on the operational performance and selection of transducers, instruments, and systems for biomedical data acquisition and processing. Selected laboratory work emphasizes the measurement of specific physiologic events. Students will design and build a working medical instrument. Consent of instructor required. Not open to students who have taken Biomedical Engineering 164L. One course. *Wolf*

233. Modern Diagnostic Imaging Systems. The underlying concepts and instrumentation of several modern medical imaging modalities. Review of applicable linear systems theory and relevant principles of physics. Modalities studied include X-ray radiography (conventional film-screen imaging and modern electronic imaging), computerized tomography (including the theory of reconstruction), and nuclear magnetic resonance imaging. Prerequisite: junior or senior standing. One course. *Trahey*

235. Acoustics and Hearing. The generation and propagation of acoustic (vibrational) waves and their reception and interpretation by the auditory system. Topics under the heading of generation and propagation include free and forced vibrations of discrete and continuous systems, resonance and damping, and the wave equation and solutions. So that students may understand the reception and interpretation of sound, the anatomy and physiology of the mammalian auditory system are presented; and the mechanics of the middle and inner ears are studied. Prerequisites: Mathematics 111 and Physics 52L or equivalents. C-L: Electrical Engineering 284. One course. *Collins or Trahey*

237. Biosensors. Biosensors are defined as the use of biospecific recognition mechanisms in the detection of analyte concentration. The basic principles of protein binding with specific reference to enzyme-substrate, lectin-sugar, antibody-antigen, and receptor-transmitting binding. Simple surface diffusion and absorption physics at surfaces with particular attention paid to surface binding phenomena. Optical, electrochemical, gravimetric, and thermal transduction mechanisms which form the basis of the sensor design. Prerequisites: Biomedical Engineering 215 and consent of instructor. One course. *Reichert*

239. Cell Transport Mechanisms. Analysis of the migration of cells through aqueous media. Focus on hydrodynamic analysis of the directed self-propulsion of individual cells, use of random walk concepts to model the nondirected propulsion of individual cells, and development of kinetic theories of the migrations of populations of cells. Physical and chemical characteristics of the cells' environments that influence their motion, including rheologic properties and the presence of chemotactic, stimulatory, or inhibitory factors. Cell systems include mammalian sperm migration through the female reproductive tract, protozoa, and bacteria. Emphasis on mathematical theory. Experimental designs and results. Consent of instructor required. One course. *Katz*

241. Artificial Intelligence in Medicine. Basic concepts of artificial intelligence (AI) and in-depth examination of medical applications of AI. Knowledge of heuristic programming; brief examination of classic AI programming languages (LISP and PROLOG) and AI programming; rule-based systems and cognitive models. One course. *Hales or Hammond*

243. Introduction to Medical Informatics. An introduction to medical informatics: an in-depth study of the use of computers in biomedical applications. Hardware, software, and applications programming. Data collection, analysis, and presentation studied within application areas such as patient monitoring, computer-based medical records, computer-aided decision making, computer-aided instruction, quality assurance laboratory systems, waveform analysis, hospital information systems, and medical information systems. One course. *Hales or Hammond*

244. Mathematical Models of Physiological Systems. Mathematical modeling and computer simulation of physiological and other biomedical systems. Formulation of quantitative models of physiological processes using methods drawn from a variety of engineering disciplines including transport phenomena, feedback control, and continuum mechanics. Digital techniques for the solution of coupled nonlinear equations, emphasizing systems of ordinary and partial differential equations. Selected readings from the literature covering current models of cardiovascular, renal, neural, respiratory, and sensory systems. Prerequisite: Mathematics 111 or equivalent. One course. *Pasipoularides*

246. Computational Methods in Biomedical Engineering. Introduction to practical computational methods for data analysis and simulation with a major emphasis on implementation. Methods include numerical integration and differentiation, extrapolation, interpolation, splining FFTs, convolution, ODEs, and simple one- and two-dimensional PDEs using finite differencing. Introduction to concepts for optimizing codes on a CRAY-YMP. Examples from biomechanics, electrophysiology, and imaging. Project work included and students must have good working knowledge of Unix, Fortran, or C. Intended for graduate students and seniors who plan on attending graduate school. Prerequisite: Engineering 53L or equivalent, Mathematics 111 or equivalent, or consent of instructor. One course. *Henriquez*

250. Cardiovascular Mechanics. Mechanical principles and their applications in the human circulatory system. The coupling of solid and fluid behavior in cardiovascular organs is emphasized. Topics include: gravity and the circulation, kinematics of blood flow and circulatory volume balances, peripheral resistance, wall stresses and deformations, cardiac cycle and cardiac work, circulatory wave propagation, unsteady velocity profiles and boundary layers. Special student projects involve the design of diagnostic and therapeutic instruments and devices for cardiovascular applications. Prerequisites: Biomedical Engineering 110L and Mathematics 111 or equivalent. One course. *Pasipoularides*

260. Devices for the Disabled. Design of custom devices to aid disabled individuals. Students will be paired with health care professionals at local hospitals who will supervise the development of projects for specific clients. Formal engineering design principles will be emphasized; overview of associative technologies, patent issues, engineering ethics. Oral and written reports will be required. Selected projects may be continued as independent study. Prerequisite: Biomedical Engineering 164L or equivalent or consent of instructor. One course. *Bohs*

264L. Medical Instrument Design. General principles of signal acquisition, amplification processing, recording, and display in medical instruments. System design, construction, and evaluation techniques will be emphasized. Methods of real-time signal processing will be reviewed and implemented in the laboratory. Each student will design, construct, and demonstrate a functional medical instrument and collect and analyze data with that instrument. Formal write-ups and presentations of each project will be required. Prerequisite: Biomedical Engineering 164L or equivalent or senior standing. One course. *Smith, Trahey, or Wolf*

265. Advanced Topics in Biomedical Engineering. Advanced subjects related to programs within biomedical engineering tailored to fit the requirements of a small group. Consent of instructor required. One course. *Staff*

COURSES CURRENTLY UNSCHEDULED

106. Mass and Energy Balances in Chemical and Biological Systems
132. Statistical and Computational Methods in Signal Processing
206L. Microprocessors and Digital Instruments
209. Kinetics and Reactor Design
223. Cellular and Integrative Cardiovascular Physiology and Biophysics
230. Biomechanics

THE MAJOR

The major requirements are included in the minimum total of thirty-four courses listed under general requirements and departmental requirements. The following specific courses or their approved alternatives must be included: Biomedical Engineering 83L, 101, 110L, 145, 163, 164, and 207.

Civil and Environmental Engineering (CE)

Professor Petroski, *Chair*; Associate Professor Pas, *Director of Undergraduate Studies*; Professors Haff, Melosh, S. Utku, Vesilind, and J. F. Wilson; Associate Professors Hueckel, Kabala, Malin, Medina, Peirce, Reckhow, Rojstaczer, and Virgin; Assistant Professors Boadu, Gavin, Katul, and Laursen; Professor Emeritus Brown; Adjunct Associate Professors Piver and B. Utku; Visiting Professor Narayanan

A major in civil engineering is available in this department. The civil engineering program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

The infrastructure that makes up what we refer to as civilization is, for the most part, the work of civil and environmental engineers. Improving, or even maintaining, the quality of life is ever more challenging as urban problems in the industrialized nations of the world intensify, while rapid urbanization in many developing countries creates other opportunities and obligations for the civil and environmental engineer. The planning, design, construction, and maintenance of necessary facilities, in an era of increasingly scarce monetary and other resources, demand civil and environmental engineers dedicated to work for the public good and prepared to seek more efficient and effective solutions based on current technology. The challenges faced by civil and environmental engineers vary widely in nature, size, and scope, and encompass both the public and private sectors. Examples include: space structures and launch facilities, hazardous waste disposal facilities, water supply and treatment facilities, power plants, bridges, dams, buildings, tunnels, highways, subways, seaports, airports, and offshore structures.

The mission of the undergraduate program in the Department of Civil and Environmental Engineering at Duke University is to provide an education that prepares graduates to solve technical problems, to pursue life-long learning in their field, to assume leadership roles in their chosen careers, and to recognize their professional and personal obligations to the broader society and culture. The program is designed to provide a holistic educational experience where engineering sciences and design are combined with humanities and social sciences to provide the foundation for the critical thinking and skills that allow graduates to enjoy the benefits of a liberal education.

The goals of the program are to help graduates develop:

- (1) a solid understanding of the engineering sciences and the process of engineering design;
- (2) the ability to think critically;
- (3) the ability to communicate orally, in writing, and mathematically;
- (4) the ability to analyze and understand the social, economic, ethical and environmental implications of their engineering work;

(5) the ability to work individually, as well as in teams, and manage the work of others; and

(6) a commitment to life-long learning and professional development.

Students can emphasize any one of the specialty areas in which the faculty is engaged in teaching and research, including: environmental engineering, structural engineering and mechanics, transportation and systems engineering, water resources, and geotechnical engineering. The department also offers a certificate program in architectural engineering. Students may also enroll in the very selective BSE/MBA degree program and after five years of study obtain an engineering degree and an MBA degree from Duke's Fuqua School of Business. In addition, students may pursue a degree in civil engineering coupled with a double major in another department at Duke. Examples of recently completed double majors reflect the breadth of interests shared by civil and environmental engineering students at Duke: public policy studies, economics, French, mathematics, and music.

The civil and environmental engineering program is built upon the expertise and experience of the faculty and is supported by commensurate laboratory and instructional facilities. The civil and environmental engineering professors are committed to providing quality classroom instruction, advising, and laboratory experiences in settings that encourage student-faculty as well as student-student interactions. The faculty conducts research of national and international consequence, and undergraduates have ample opportunities to be involved in such research, through undertaking independent study projects and/or by working as research assistants. The research facilities in the department, including laboratory equipment and instrumentation as well as computer resources, are comparable to those found in other major universities.

Graduates of the Department of Civil and Environmental Engineering are able to select from a wide range of career paths. Recent graduates have pursued advanced study in engineering, business, law, and architecture, while others have accepted positions with major corporations and federal, state, and local government agencies as design engineers and project managers.

116. Transportation Engineering. The role and history of transportation. Introduction to the planning and design of multimodal transportation systems. Principles of traffic engineering, route location, and geometric design. Planning studies and economic evaluation. Prerequisites: Statistics 113 and consent of instructor for nonengineering students. One course. *Pas*

122L. Fluid Mechanics. Physical properties of fluids; fluid-flow concepts and basic equations; continuity, energy, and momentum principles; dimensional analysis and dynamic similitude; viscous effects; applications emphasizing real fluids. Selected laboratory work. Corequisite: Engineering 123L. One course. *Boadu, Kabala, Laursen, or Medina*

123L. Water Resources Engineering. Descriptive and quantitative hydrology, hydraulics of pressure conduits and measurement of flow, compound pipe systems, analysis of flow in pressure distribution systems, open channel flow, reservoirs and distribution system storage. Groundwater hydrology and well-hydraulics. Probability and statistics in water resources. Selected laboratory and field exercises, computer applications. Prerequisite: Civil Engineering 122L. One course. *Kabala or Medina*

124L. Environmental Engineering. Physical, chemical, and biological characterization of water and wastewater. Introduction to water treatment processes and wastewater collection, treatment and disposal systems. Air pollution control; solid and hazardous waste engineering. Laboratory included. Field trips to be arranged. Prerequisite: Civil Engineering 122L. One course. *Peirce*

127. Environmental Pollution Control. A study of the environmental causes and effects of air, land, and water pollution. Interactions between the environment and stresses to which it is subjected as a consequence of growth and concentration of populations and their

increasing demands on natural resources. Solid waste, recycling, noise pollution, and environmental ethics. Not open to engineering majors. One course. *Vesilind*

131L. Theory of Structures. Application of the principles of mechanics of deformable bodies to the analysis of plane and space structures: linear analysis by hand and by machine, of statically determinate and indeterminate structures of one-dimensional elements, with the force, displacement, and mixed methods. Prerequisites: Engineering 75L and Mathematics 103. One course. *S. Utku*

133L. Structural Design I. Nonhomogenous materials. Determination of physical and mechanical properties of construction materials. Theory and design of compression and flexural members. Emphasis on ultimate strength theory for concrete. Timber design using mechanical fasteners. Laboratory exercises include concrete aggregate evaluation, concrete mix design, and structural timber tests. Prerequisite: Engineering 75L. One course. *Narayanan*

134L. Structural Design II. Design in metals, primarily steel. Properties of materials as criteria for failure. Tension, compression, and flexural members. Bolted and welded connections, including eccentric connections. Built-up members. Design by elastic and plastic methods. Selected problems to include computations and drawings. Prerequisite: Engineering 75L. One course. *Narayanan*

139L. Introduction to Soil Mechanics. Origin and composition of soils, soil structure. Flow of water through soils. Environmental geotechnology: land waste disposal, waste containment, and remediation technologies. Soil behavior under stress; compressibility, shear strength. Elements of mechanics of soil masses with application to problems of bearing capacity of foundations, earth pressure on retaining walls, and stability of slopes. Laboratory included. Prerequisite: Civil Engineering 122L. One course. *Hueckel*

141, 142. Special Topics in Civil Engineering. Study arranged on a special topic in which the instructor has particular interest and competence. Consent of instructor and director of undergraduate studies required. Half course or one course each. Variable credit. *Staff*

161. Architectural Engineering I. Analysis of the building through the study of its subsystems (enclosure, space, structural, environmental-control). Building materials and their principal uses in the enclosure and structural subsystems. Computer aided design. Field trips. Prerequisite: junior or senior standing, consent of instructor for nonengineering students. One course. *B. Utku*

162. Architectural Engineering II. Design and integration of building subsystems (enclosure, space, structural, environmental-control) in the design of a medium-sized building. Prerequisite: Civil Engineering 161 or consent of instructor. One course. *B. Utku*

192. Civil Engineering Design. Student design teams complete a preliminary design of an actual civil engineering project and present the design to a panel of civil engineering faculty and practitioners. A written technical report is required. Topics to be addressed include: the design process; cost estimation; legal, ethical, and social aspects of professional engineering practice; short-term and long-term design serviceability considerations. Open only to civil engineering students during their final two semesters. One course. *Narayanan and staff*

197, 198. Projects in Civil Engineering. These courses may be taken by junior and senior engineering students who have demonstrated aptitude for independent work. Consent of instructor and director of undergraduate studies required. Half course or one course each. Variable credit. *Staff*

201. Advanced Mechanics of Solids. Tensor fields and index notation. Analysis of states of stress and strain. Conservation laws and field equations. Constitutive equations for elastic,

viscoelastic, and elastic-plastic solids. Formulation and solution of simple problems in elasticity, viscoelasticity, and plasticity. One course. *Hueckel, Laursen, or Petroski*

203. Plasticity. Inelastic behavior of soils and engineering materials. Yield criteria. Flow rules. Concepts of perfect plasticity and plastic hardening. Methods of rigid-plasticity. Limit analysis. Isotropic and kinematic hardening. Plastic softening. Diffused damage. Thermo-plasticity. Visco-plasticity. Prerequisite: Civil Engineering 201 or consent of instructor. One course. *Hueckel*

204. Plates and Shells. Differential equation and extremum formulations of linear equilibrium problems of Kirchhoffian and non-Kirchhoffian plates of isotropic and anisotropic material. Solution methods. Differential equation formulation of thin anisotropic shell problems in curvilinear coordinates; membrane and bending theories; specialization for shallow shells, shells of revolution, and plates. Extremum formulation of shell problems. Solution methods. Prerequisites: Engineering 75L or 135 and Mathematics 111. One course. *S. Utku*

207. Transport Phenomena in Biological Systems. See C-L: Biomedical Engineering 207; also C-L: Mechanical Engineering 207. One course. *Katz, Truskey, or Yuan*

210. Intermediate Dynamics. See C-L: Mechanical Engineering 210. One course. *Hall or Knight*

217. Transportation Systems Analysis. The transportation systems planning process. Quantitative analysis; mathematical modeling and computer simulation techniques for short-and long-range planning and evaluation of transportation systems. Prerequisite: (or corequisite) Civil Engineering 116 or consent of instructor. One course. *Pas*

218. Engineering Management and Project Evaluation. Economics and statistical analysis. Economic impact assessment, supply and demand forecasting, benefit/cost analysis, economic incentives, public and private finance, input/output analysis. Data organization, distributions, estimates of parameters, hypothesis testing, analysis of variance, and experimental design. One course. *Peirce*

220. Water Resources Systems Planning and Management. Focus on the development and application of mathematical modeling techniques to water resources systems problems. Deterministic and stochastic river basin modeling, irrigation planning and modeling, water quality prediction and management, wetlands management, the optimal expansion of existing water resources systems and reservoir operations. Emphasis on development and application of optimization models for the planning and management of complex water resources systems involving the interaction of groundwater and surface water resources. Mathematical techniques include linear and dynamic programming, Monte Carlo simulation, simulated annealing, nonlinear optimization and stochastic optimization. Prerequisites: Civil Engineering 123L and Engineering 115 or equivalent. One course. *Staff*

221. Engineering Systems Reliability, Safety, and Risk Assessment. Introduction to the concepts of design reliability and safety. Topics include: concepts of probability in engineering planning and design, decision analysis and assessment of reliability, modeling and analysis of uncertainty, reliability-based design, multiple failure mode analysis, redundant and nonredundant systems, and fault tree analysis. Emphasis on determining the probability of failure for numerous engineering systems including structural systems, infrastructure systems, water treatment systems, environmental systems, and transportation networks. Prerequisite: Mathematics 111 or consent of instructor. One course. *Staff*

225. Dynamic Engineering Hydrology. Dynamics of the occurrence, circulation, and distribution of water; climate, hydrometeorology, geophysical fluid motions. Precipitation, surface runoff and stream flow, infiltration, water losses. Hydrograph analysis, catchment

characteristics, hydrologic instrumentation, and computer simulation models. Prerequisite: Civil Engineering 122L or consent of instructor. One course. *Medina*

227. Groundwater Hydrology and Contaminant Transport. Review of surface hydrology and its interaction with groundwater. The nature of porous media, hydraulic conductivity, and permeability. General hydrodynamic equations of flow in isotropic and anisotropic media. Water quality standards and contaminant transport processes: advective-dispersive equation for solute transport in saturated porous media. Analytical and numerical methods, selected computer applications. Deterministic versus stochastic models. Applications: leachate from sanitary landfills, industrial lagoons and ponds, subsurface wastewater injection, monitoring of groundwater contamination. Conjunctive surface-subsurface models. Prerequisite: Civil Engineering 123L or consent of instructor. One course. *Medina*

228L. Sludge Management and Disposal. Production and characterization of residues from wastewater treatment. Theory of solid/water interfaces and vicinal water. Gravitational thickening and dewatering. Anaerobic stabilization, incineration, composting, and other treatment processes. Ultimate disposal. Prerequisites: Civil Engineering 124L or equivalent and consent of instructor. One course. *Vesilind*

231. Theory of Adaptive Structures. Behavior of structures composed of one-dimensional members, under inserted internal deformations. Linear excitation-response relations. Energy and power requirements of insertion. Conditions of insertion without structural resistance. Computation of internal deformations yielding a partially prescribed response. Static shape control and slow moving mechanical manipulators. Vibration control by internal deformation insertion in autonomous and nonautonomous systems. Prerequisite: senior or graduate standing. One course. *S. Utku*

233. Prestressed Concrete Design. A critical review of research and recent developments in prestressed concrete design. Prestressed tanks, beams, and columns; partial prestressing and composite design. Prerequisite: Civil Engineering 133L or consent of instructor. One course. *Narayanan*

237. Advanced Soil Mechanics. Characterization of behavior of geomaterials. Stress-strain incremental laws. Nonlinear elasticity, hypo-elasticity, plasticity and visco-plasticity of geomaterials; approximated laws of soil mechanics; fluid-saturated soil behavior; cyclic behavior of soils; liquefaction and cyclic mobility; elements of soil dynamics; thermal effects on soils. Prerequisite: Civil Engineering 139L or equivalent. One course. *Hueckel*

240. Fate of Organic Chemicals in the Aquatic Environment. Kinetic, equilibrium, and analytical approaches applied to quantitative description of processes affecting the fate of anthropogenic and natural organic compounds in surface and groundwaters and in selected treatment processes, including sorption phenomena, gas transfer, hydrolysis, photochemistry, oxidation-reduction, and biodegradation. Sampling, detection, identification, and quantification of organic compounds in the environment. Gas and liquid chromatography and mass spectrometry. Prerequisites: university-level general chemistry and organic chemistry within last four years. C-L: Environment 240. One course. *Dubay*

241. Atmospheric Chemistry and Air Pollution. Chemical kinetics and equilibrium applied to the mechanistic and quantitative description of processes affecting the fates of anthropogenic and natural chemicals in the troposphere, on local, regional, and global scales. Direct photolysis; gas-phase photo-formation and fates of ozone, radicals, and other oxidants; gas-phase oxidations of volatile organic compounds; gas-to-drop partitioning; aqueous-phase photoformation and fates of hydrogen peroxide, radicals, and other oxidants in the aqueous phases of clouds, fogs, and aerosols; effects of aqueous-phase reactions on the chemical composition of the troposphere; gas-phase and aqueous-phase oxidations of organic and inorganic compounds; stratospheric ozone depletion. Prerequisites: university-

level general chemistry and organic chemistry within last four years. C-L: Environment 241. One course. *Staff*

242. Environmental Aquatic Chemistry. Principles of chemical kinetics and equilibria applied to quantitative description of the chemistry of lakes, rivers, oceans, groundwaters, and selected treatment processes. Equilibrium, steady state, and other kinetic models applied to processes such as the carbonate system, coordination chemistry, precipitation and dissolution, oxidation-reduction, photochemistry, adsorption, and heterogeneous reactions. Prerequisite: university-level general chemistry within last four years. C-L: Environment 242. One course. *Staff*

243. Physicochemical Unit Operations in Water Treatment. Fundamental bases for design of water and waste treatment systems, including transport, mixing, sedimentation and filtration, gas transfer, coagulation, and absorption processes. Emphasis on physical and chemical treatment combinations for drinking water supply. Prerequisite: Civil Engineering 124L. One course. *Kabala*

244. Applied Microbial Processes. Existing and novel microbial processes as they pertain to biotechnological products, specialty bioconversions, and to treat or exploit wastes. Concepts of microbiology, chemical engineering, the stoichiometry and kinetics of complex microbial metabolism, and process analysis. Specific processes such as carbon oxidation, vinegar and alcohol production, nitrification, methane production, biological electricity generation, recombinant protein secretion, and wastewater treatment in long-term space travel are discussed. Consent of instructor required. One course. *Staff*

245. Pollutant Transport Systems. Distribution of pollutants in natural waters and the atmosphere; diffusive and advective transport phenomena within the natural environment and through artificial conduits and storage/treatment systems. Analytical and numerical prediction methods. Prerequisites: Civil Engineering 122L and Mathematics 111 or equivalents. One course. *Medina*

246. Water Supply Engineering Design. The study of water resources and municipal water requirements including reservoirs, transmission, treatment and distribution systems; methods of collection, treatment, and disposal of municipal and industrial wastewaters. The course includes the preparation of a comprehensive engineering report encompassing all aspects of municipal water and wastewater systems. Field trips to be arranged. Prerequisite: Civil Engineering 124L or consent of instructor. One course. *Vesilind*

247. Air Pollution Control Engineering. The problems of air pollution with reference to public health and environmental effects. Measurement and meteorology. Air pollution control engineering: mechanical, chemical, and biological processes and technologies. One course. *Peirce*

248. Solid Waste Engineering. Engineering design of material and energy recovery systems including traditional and advanced technologies. Sanitary landfills and incineration of solid wastes. Application of systems analysis to collection of municipal refuse. Major design project in solid waste management. Prerequisite: Civil Engineering 124L or consent of instructor. C-L: Environment 248. One course. *Vesilind*

249. Control of Hazardous and Toxic Waste. Engineering solutions to industrial and municipal hazardous waste problems. Handling, transportation, storage, and disposal technologies. Biological, chemical, and physical processes. Upgrading abandoned disposal sites. Economic and regulatory aspects. Case studies. Consent of instructor required. One course. *Peirce*

251. Systematic Engineering Analysis. Mathematical formulation and numerical analysis of engineering systems with emphasis on applied mechanics. Equilibrium and eigenvalue

problems of discrete and distributed systems; properties of these problems and discretization of distributed systems in continua by the trial functions with undetermined parameters. The use of weighted residual methods, finite elements, and finite differences. Prerequisite: senior or graduate standing. One course. *Laursen or S. Utku*

252. Buckling of Engineering Structures. An introduction to the underlying concepts of elastic stability and buckling, development of differential equation and energy approaches, buckling of common engineering components including link models, struts, frames, plates, and shells. Consideration will also be given to inelastic behavior, postbuckling, and design implications. Prerequisite: Civil Engineering 131L or consent of instructor. C-L: Mechanical Engineering 252. One course. *Virgin*

254. Introduction to the Finite Element Method. Investigation of the finite element method as a numerical technique for solving linear ordinary and partial differential equations, using rod and beam theory, heat conduction, elastostatics and dynamics, and advective/diffusive transport as sample systems. Emphasis placed on formulation and programming of finite element models, along with critical evaluation of results. Topics include: Galerkin and weighted residual approaches, virtual work principles, discretization, element design and evaluation, mixed formulations, and transient analysis. Prerequisites: a working knowledge of ordinary and partial differential equations, numerical methods, and programming in FORTRAN. One course. *Laursen*

255. Nonlinear Finite Element Analysis. Formulation and solution of nonlinear initial/boundary value problems using the finite element method. Systems include nonlinear heat conduction/diffusion, geometrically nonlinear solid and structural mechanics applications, and materially nonlinear systems (for example, elastoplasticity). Emphasis on development of variational principles for nonlinear problems, finite element discretization, and equation-solving strategies for discrete nonlinear equation systems. Topics include: Newton-Raphson techniques, quasi-Newton iteration schemes, solution of nonlinear transient problems, and treatment of constraints in a nonlinear framework. An independent project, proposed by the student, is required. Prerequisite: Civil Engineering 254 or consent of instructor. One course. *Laursen*

260. Vadose Zone Hydrology. Transport of fluids, heat, and contaminants through unsaturated porous media. Understanding the physical laws and mathematical modeling of relevant processes. Field and laboratory measurements of moisture content and matric potential. Prerequisites: Civil Engineering 122L and Mathematics 111, or consent of instructor. One course. *Kabala*

261. Stochastic Subsurface Hydrology. Stochastic partial differential equations of subsurface hydrology and their solutions for the first few concentration moments and for the full concentration probability density function. Local and nonlocal models. Formulation in terms of integral properties of porous media which account for heterogeneities that influence solute transport. Prerequisites: Civil Engineering 122L and Mathematics 111, or consent of instructor. One course. *Kabala*

263. Multivariable Control. Synthesis and analysis of multivariable linear dynamic feedback compensators. Standard problem formulation. Performance norms. Full state feedback and linear quadratic Gaussian synthesis. Lyapunov and Riccati equations. Passivity, positivity, and self-dual realizations. Nominal performance and robust stability. Applications to vibration control, noise suppression, tracking, and guidance. Prerequisites: a course in linear systems and classical control, or consent of instructor. C-L: Electrical Engineering 263 and Mechanical Engineering 263. One course. *Bushnell, Clark, Gavin, or H. Wang*

264. Physico-Bio-Chemical Transformations. Surveys of a selection of topics related to the interaction between fluid flow (through channels or the porous media) and physical, chemical, and biochemical transformations encountered in environmental engineering. Nu-

merous diverse phenomena, including solute transport in the vicinity of chemically reacting surfaces, reverse osmosis, sedimentation, centrifugation, ultrafiltration, rheology, microorganism population dynamics, and others will be presented in a unifying mathematical framework. Prerequisites: Civil Engineering 122L and Mathematics 111, or consent of instructor. One course. *Kabala*

265. Advanced Topics in Civil and Environmental Engineering. Opportunity for study of advanced subjects relating to programs within the civil and environmental engineering department tailored to fit the requirements of individuals or small groups. One course. *Staff*

270. Environmental and Engineering Geophysics. Use of geophysical methods for solving engineering and environmental problems. Theoretical frameworks, techniques, and relevant case histories as applied to engineering and environmental problems (including groundwater evaluation and protection, siting of landfills, chemical waste disposals, roads assessments, foundations investigations for structures, liquefaction and earthquake risk assessment). Introduction to theory of elasticity and wave propagation in elastic and poroelastic media, electrical and electromagnetic methods, and ground penetrating radar technology. Prerequisite: Mathematics 111 or Physics 52L or consent of instructor. One course. *Boadu*

271. Inverse Problems in Geosciences and Engineering. Basic concepts, theory, methods of solution, and application of inverse problems in engineering, groundwater modeling, and applied geophysics. Deterministic and statistical frameworks for solving inverse problems. Strategies for solving linear and nonlinear inverse problems. Bayesian approach to nonlinear inverse problems. Emphasis on the ill-posed problem of inverse solutions. Data collection strategies in relation to solution of inverse problems. Model structure identification and parameter estimation procedures. Prerequisite: Mathematics 111 or consent of instructor. One course. *Boadu*

281. Experimental Systems. Formulation of experiments; Pi theorem and principles of similitude; data acquisition systems; static and dynamic measurement of displacement, force, and strain; interfacing experiments with digital computers for data storage, analysis, and plotting. Students select, design, perform, and interpret laboratory-scale experiments involving structures and basic material behavior. Prerequisite: senior or graduate standing in engineering or the physical sciences. One course. *J. F. Wilson*

283. Structural Dynamics. Formulation of dynamic models for discrete and continuous structures; normal mode analysis, deterministic and stochastic responses to shocks and environmental loading (earthquakes, winds, and waves); introduction to nonlinear dynamic systems, analysis and stability of structural components (beams and cables and large systems such as offshore towers, moored ships, and floating platforms). One course. *J. F. Wilson*

COURSES CURRENTLY UNSCHEDULED

- 99. Structures in Byzantine Architecture**
- 202. Advanced Mechanics of Solids II**
- 205. Elasticity**
- 209. Kinetics and Reactor Design**
- 212. Mechanical Behavior and Fracture of Materials**
- 215. Engineering Systems Analysis**
- 216. Transportation Planning and Policy Analysis**
- 226. Operational Hydrology**
- 232. Reinforced Concrete Design**
- 234. Advanced Structural Design in Metals**
- 235. Foundation Engineering**
- 236. Earth Structures**
- 238. Rock Mechanics**
- 239. Physical Properties of Soils**

THE MAJOR

The major requirements are included in the minimum of thirty-four courses listed under general requirements and departmental requirements. The following specific courses must be included: Engineering 75L, 115, 123L, and 150L; Civil Engineering 122L, 131L, and 192. In addition, Engineering 24L and 25L, or a higher level environmental engineering and structural engineering course, respectively, must be included.

Electrical and Computer Engineering (EE)

Professor Gelenbe, *Chair*; Visiting Professor McCumber, *Director of Undergraduate Studies*; Professors Casey, Fair, Joines, Marinos, Nolte, Trivedi, and P. Wang; Associate Professors Board, Carin, Kedem, Krolik, and Massoud; Assistant Professors Collins, Daniels-Race, George, Hansen, and H. Wang; Professors Emeritus Owen and Wilson; Assistant Research Professor Ybarra; Adjunct Professors Lontz, Marin, and Stroschio; Adjunct Associate Professors Ardalan, Derby, and Kanopoulos; Adjunct Assistant Professors Bottomley, Bushnell, Gun, Morizio, Onvural, Palmer, and Spano; Visiting Professors Iafrate and Kaiser

A major in electrical engineering is available in this department. This major program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Electrical engineering is a broadly-based engineering discipline dealing with the processing, control, and transmission of information and energy by making use of electrical and electromagnetic phenomena. Electrical engineers design, build, and make extensive use of computers.

The goals of the Electrical Engineering Program at Duke are to help students develop: a solid understanding of the engineering sciences and of the practice of engineering design; the ability to formulate and solve problems; the ability to think critically; the ability to communicate well in the written and spoken word and in the language of mathematics; the ability to understand the social, economic, ethical and environmental implications of their work; the ability to work individually, as well as in teams, and to manage the work of others; and a commitment to life-long learning and professional development. Most Duke electrical engineers graduate to a first job in engineering or management, to graduate or professional schools, or to an ROTC appointment in the armed forces.

The Electrical Engineering Program builds upon a logical progression from basic principles to more advanced and specialized topics. To ensure breadth of exposure, each student must choose a minimum of two upper-level electrical engineering courses in each of two concentration areas among computer engineering, signal processing and communications, solid-state electronics and circuits, systems and robotics, and electromagnetic fields and optics. These course sequences prepare students for professional work in at least two areas of concentration. They reinforce in those students expecting to enter fields such as medicine or law the broad relevance of the powerful problem-solving methodologies of engineering, and they illuminate some of the exciting productivity enabling possibilities of sophisticated uses of computers and information technology. Many students explore additional areas more deeply either by taking additional advanced courses or by independent study with faculty experts in the field. The total program provides an excellent foundation for continuing professional development after graduation.

Engineering design is integrated throughout the curriculum. In addition, prior to graduation, each electrical engineering major must complete an approved design course which requires significant design experience and integrates science, engineering and design principles learned in prior courses into a meaningful design outcome.

The major program is sufficiently flexible to permit motivated students to complete the requirements for a second major in such areas as biomedical engineering, computer science,

physics, mathematics, economics, public policy studies, and others. Interests such as pre-medicine, prelaw, art, music, psychology, and social sciences can be accommodated through individually designed programs.

Students are encouraged to take more than the minimum required courses in the sciences and the liberal arts, as is fitting at an engineering school in a university with a strong liberal-arts tradition. In addition, juniors and seniors can, with proper planning, participate in international programs. These include a semester of study abroad, the International Honors Program, and an International Telecommunications Program which leads to a master's degree.

Classroom lectures are enhanced and augmented by intensive use of the department's extensive computer and laboratory facilities. The department maintains over eighty networked computer workstations, servers and X-terminals interconnected via an Ethernet network which also gives access to campus, regional, and international data networks, including the Internet. Undergraduate laboratories are well-equipped with electronic components, digitizing oscilloscopes, PC-controlled instrumentation, logic analyzers, and commercial-quality CAD tools for system and IC design. Laboratories and equipment are also available for microprocessor and computer architecture studies, rapid system prototyping, custom integrated circuit design and testing, integrated circuit fabrication, digital speech processing, image processing, robotics, digital communications, and microwaves. These facilities are important to the undergraduate program since they permit students to become very familiar with the devices and design tools of practicing electrical engineers through scheduled laboratory experiments, projects, and independent study with faculty members engaged in research. Current areas of research include computer engineering, computer architecture, fault-tolerant computer systems, scientific computing, parallel processing, VLSI CAD tools, signal processing, digital speech processing, signal detection and estimation, ocean acoustic signal processing, image processing, neural networks, fuzzy logic, solid-state electronics, integrated circuit processing and process simulation, molecular-beam epitaxy, III-V compound semiconductor materials and devices, machine intelligence, and applications of electromagnetic fields and waves.

61L. Introduction to Electric Circuits. Techniques for analyzing linear circuits. Nodal and mesh analysis, superposition and linearity, Thevenin and Norton equivalent circuits, operational amplifiers, energy storage, transient analysis, phasors and impedance, RMS values, AC power, frequency response, resonance, and filters. Circuit simulation using SPICE. Prerequisite: Mathematics 32. One course. *Staff*

62L. Introduction to Electronics: Devices. Integrated-circuit fabrication. Fundamentals of semiconductor physics. Device modeling. Basic device operation, $I(V)$ characteristics, temperature effects, capacitance effects, equivalent circuit and SPICE models, high-frequency and switching properties of: PN junction diodes, Schottky barriers, bipolar-junction transistors, MOS capacitors, and field-effect transistors. Basic electronic circuits; electronic-circuit analysis and design. Prerequisite: Electrical Engineering 61L. One course. *Staff*

64. Fundamentals of Linear System Theory. Signal representations, system response, convolution, correlation; Fourier series and transforms, transfer functions; Laplace transforms, state variables, stability; discrete signals and transforms, fast Fourier transform; z transforms. Applications to networks, modulation, sampling, filtering. Computer solutions of problems using MAPLE and SPICE. Prerequisite: Electrical Engineering 61L. One course. *Staff*

141. Linear Control Systems. Analysis and design of feedback control systems. Block diagram and signal flow graph system models. Servomechanism characteristics, steady-state errors, sensitivity to parameter variations and disturbance signals. Time domain performance specifications. Stability. Root locus, Nyquist, and Bode analysis; design of compensation circuits; closed loop frequency response determination. Introduction to time domain analysis and design. Prerequisite: Electrical Engineering 64 or consent of instructor. One course. *Wang*

142. Introduction to Robotics and Automation. Fundamental notions in robotics, basic configurations of manipulator arm design, coordinate transformations, control functions, and robot programming. Applications of artificial intelligence, machine vision, force/torque, touch and other sensory subsystems. Design for automatic assembly concepts, tools, and techniques. Application of automated and robotic assembly costs, benefits, and economic justification. Selected laboratory and programming assignments. Prerequisites: Electrical Engineering 64 and consent of instructor. One course. *Staff*

148L. Electrical Energy Systems. Electrical systems including energy distribution, static, linear, and rotary energy conversion, and control functions, linear and discrete, for energy conversion. DC and steady-state AC circuits. Transmission lines for distribution and signal transfer. Studies of static transformers, linear transducers, and rotary machines. Control theory applied to system operation. Laboratory. Prerequisites: Physics 52L and either Electrical Engineering 61L or Mathematics 111. One course. *George*

151L. Introduction to Switching Theory and Logic Design. Techniques for the analysis and design of combinational and sequential networks. Discrete mathematical systems, binary arithmetic, Boolean algebra, minimization of functions, synchronous and fundamental mode sequential circuit design, design with MSI and LSI components, and special properties of switching functions are covered. Selected laboratory work. C-L: Computer Science 120L. One course. *Marinos*

152L. Introduction to Computer Architecture. Architecture and organization of digital computer systems. Processor operation, computer arithmetic, instruction set design. Assembly language programming. Selected hardware and software exercises culminating in the design, simulation, and implementation in FPGA technology of the major components of a complete computer system. Not open to students who have taken Computer Science 104. Prerequisite: Electrical Engineering 151L. One course. *Board*

156. Computer Network Architecture. The architecture of computer communication networks and the hardware and software required to implement the protocols that define the architecture. Basic communication theory, transmission technology, private and common carrier facilities. International standards. Satellite communications and local area networks. Performance analysis and modeling of communication networks. Prerequisite: Electrical Engineering 151L. One course. *Onural*

157. Computer Network Analysis and Design. Graph representation of networks. Network design problems as graph optimization problems; related graph algorithms. Elementary queuing models and formulae. Network performance issues. Modern high-speed computer-communication networks. Packet switching. Network protocols. Broadband integrated services networks (B-ISDN) and the asynchronous transfer mode (ATM). Network admission and congestion controls. One course. *Ardalan and Ybarra*

159. Discrete Mathematics. Mathematics as applied to finite and infinite collections of discrete objects, including techniques for solving engineering problems involving finite and infinite sets, permutations and combinations of elements, discrete numeric functions, finite and infinite sums. Mathematical methods needed to tackle real-world problems in computer engineering, applied mathematics, computer science, and engineering. One course. *Marin*

163L. Introduction to Electronics: Integrated Circuits. Analysis and design of electronic circuits in bipolar and MOS technologies, with emphasis on both large-signal and small-signal methods. Circuits for logic gates, latches, and memories. Single-stage and multistage amplifiers and op amps. Circuits with feedback, including stability and frequency response considerations. Analog and mixed analog/digital circuit applications. Extensive use of SPICE for circuit simulation. Prerequisite: Electrical Engineering 62L. One course. *Derby or Fair*

164L. Electronic Design Projects. Electronics project laboratory in which individuals or small teams, build, and test custom designed circuits or small systems to gain experience in the design process. Requirements: a written plan, project organization, a written report describing the project and test results, a presentation to the class of the constructed project. Enrollment limited to 20. Prerequisites: Electrical Engineering 163L (or Biomedical Engineering 163L with consent of instructor) and at least one of 141, 151L, or 181. One course. *George*

170L. Introduction to Electromagnetic Fields. Postulatory treatment of electromagnetic fields based on Maxwell's equations. Discussion of the Lorentz force equation and the Poynting theorem. Treatment of propagation, reflection, and transmission of plane waves through various media and dielectric interfaces. Introduction to electrostatic and magnetostatic fields and potential functions. Prerequisites: Mathematics 104 or 111 and Physics 52L. One course. *Carin, Joines, or Palmer*

171. Applications of Electromagnetic Fields and Waves. Solution techniques applied to static and dynamic field problems. Discussions and example applications include the following topics: waves and transmission lines, waveguides and resonators, antennas and radiation, and electromagnetic forces and energy. Prerequisite: Electrical Engineering 170L. One course. *Carin or Joines*

176. Thermal Physics. Thermal properties of matter treated using the basic concepts of entropy, temperature, chemical potential, partition function, and free energy. Topics include the laws of thermodynamics, ideal gases, thermal radiation and electrical noise, heat engines, Fermi-Dirac and Bose-Einstein distributions, semiconductor statistics, kinetic theory, and phase transformations. Prerequisites: Mathematics 103 or equivalent and Physics 51L, 52L or equivalent. C-L: Physics 176. One course. *Socular*

181. Fundamentals of Signal Processing and Communications. The fundamentals of signal representation and system characterization used in digital signal processing and communications. Communication systems: basic concepts in amplitude modulation, frequency division multiplexing, amplitude shift keying, pulse code modulation, matched filtering. Discrete-time signal processing: discrete-time systems, response with noisy excitation, introduction to digital filter design, discrete Fourier transform, fast Fourier transform. Computer applications in selected areas using MATLAB. Prerequisites: Electrical Engineering 64 and Mathematics 135 or Statistics 113, or consent of instructor. One course. *Collins*

182. Digital Filter Design. A treatment of the theory and application of processing of discrete time data. Special attention will be given to the design and implementation of both finite impulse response (FIR) and infinite impulse response (IIR) digital filters. Bilinear transformations, filter design based on Butterworth, Chebyshev, and elliptic approximations, transversal filters, effects of quantization and finite word length arithmetic in digital filters. Applications of digital signal processing in such areas as image, sonar/radar, and speech communications. Prerequisite: Electrical Engineering 181. One course. *Staff*

187. Digital Telecommunications. Examination of existing telephone networks in the U.S. with emphasis on the transition from analog to digital systems. Sequential processes of encoding, transmission, switching, and network hierarchy. Consideration of the problems which must be solved in the transition from analog to digital networks. Prerequisite: Electrical Engineering 181. One course. *Ardalan and Ybarra*

189. Image Processing. Basic concepts of the manipulation and analysis of images by computer, linear operations on pictures, Fourier transform and 2-D Z-transform, hexagonal sampling theorem, image transforms, image enhancement, image filtering and restoration, image coding, matching, segmentation, representation and description. Project presentation by students. Prerequisites: Electrical Engineering 181 and Mathematics 135. One course. *Staff*

191, 192. Undergraduate Research in Electrical Engineering. For juniors only. Half course or one course each. Variable credit. *Staff*

193, 194. Undergraduate Research in Electrical Engineering. For seniors only. Half course or one course each. Variable credit. *Staff*

195, 196. Special Topics in Electrical Engineering. Study of selected topics in electrical engineering tailored to fit the requirements of a small group. Consent of instructor and director of undergraduate studies required. Half course or one course each. Variable credit. *Staff*

197, 198. Projects in Electrical Engineering. A course which may be undertaken only by seniors who are enrolled in the graduation with distinction program or who show special aptitude for individual project work. Elective for electrical engineering majors. Consent of director of undergraduate studies required. Half course to two courses each. Variable credit. *Staff*

211. Quantum Mechanics. Discussion of wave mechanics including elementary applications, free particle dynamics, Schrödinger equation including treatment of systems with exact solutions, and approximate methods for time-dependent quantum mechanical systems with emphasis on quantum phenomena underlying solid-state electronics and physics. Prerequisite: Mathematics 111 or equivalent. One course. *Staff*

214. Introduction to Solid-State Physics. Discussion of solid-state phenomena including crystalline structures, X-ray and particle diffraction in crystals, lattice dynamics, free electron theory of metals, energy bands, and superconductivity, with emphasis on understanding electrical and optical properties of solids. Prerequisite: quantum physics at the level of Physics 143L or Electrical Engineering 211. C-L: Physics 214. One course. *Daniels-Race or Teitsworth*

215. Semiconductor Physics. A quantitative treatment of the physical processes that underlie semiconductor device operation. Topics include band theory and conduction phenomena; equilibrium and nonequilibrium charge carrier distributions; charge generation, injection, and recombination; drift and diffusion processes. Prerequisite: Electrical Engineering 211 or consent of instructor. One course. *Staff*

216. Devices for Integrated Circuits. Derivation of basic semiconductor properties such as the effective mass, effective density of states, SHR recombination, avalanche breakdown and energy-band diagrams. Application of the continuity equation, Gauss' law, and Poisson's equation to obtain the I-V and C-V behavior of Si and GaAs Schottky barriers, GaAs MESFETs; Si JFETs, bipolar transistors and MOSFETs. Relation of device physics to SPICE parameters. Four laboratory exercises. One course. *Casey*

217. Analog Integrated Circuits. Analysis and design of bipolar and CMOS analog integrated circuits. SPICE device models and circuit macromodels. Classical operational amplifier structures, current feedback amplifiers, and building blocks for analog signal processing, including operational transconductance amplifiers and current conveyors. Biasing issues, gain and bandwidth, compensation, and noise. Influence of technology and device structure on circuit performance. Extensive use of industry-standard CAD tools, such as Analog Workbench. Prerequisite: Electrical Engineering 216. One course. *Staff*

218. Integrated Circuit Engineering. Basic processing techniques and layout technology for integrated circuits. Photolithography, diffusion, oxidation, ion implantation, and metalization. Design, fabrication, and testing of integrated circuits. Prerequisite: Electrical Engineering 216. One course. *Fair*

219. Digital Integrated Circuits. Analysis and design of digital integrated circuits. IC technology. Switching characteristics and power consumption in MOS devices, bipolar

devices, and interconnects. Analysis of digital circuits implemented in NMOS, CMOS, TTL, ECL, and BiCMOS. Propagation delay modeling. Analysis of logic (inverters, gates) and memory (SRAM, DRAM) circuits. Influence of technology and device structure on performance and reliability of digital ICs. SPICE modeling. Prerequisites: Electrical Engineering 151L and 216. One course. *Massoud*

243. Pattern Classification and Recognition. Parameter estimation and supervised learning, nonparametric techniques, linear discriminant functions, clustering, language theory related to pattern recognition, examples from areas such as character and severe weather recognition, classification of community health data, recognition of geometrical configurations, algorithms for recognizing low resolution touch-sensor array signatures and 3-D objects. Consent of instructor required. One course. *P. Wang*

245. Digital Control Systems. Review of traditional techniques used for the design of discrete-time control systems; introduction of "nonclassical" control problems of intelligent machines such as robots. Limitations of the assumptions required by traditional design and analysis tools used in automatic control. Consent of instructor required. One course. *Staff*

246. Optimal Control. Review of basic linear control theory and linear/nonlinear programming. Dynamic programming and the Hamilton-Jacobi-Bellman Equation. Calculus of variations. Hamiltonian and costate equations. Pontryagin's Minimum Principle. Solution to common constrained optimization problems. This course is designed to satisfy the need of several engineering disciplines. Prerequisite: Electrical Engineering 141 or equivalent. C-L: Mechanical Engineering 232. One course. *Bushnell*

251. Advanced Digital System Design. Theory and hands-on experience in advanced digital system design. High-speed design, high complexity design (more than 10,000 gates), implementation technology selection, system modeling, power and clock distribution, line termination, and cooling. Case studies and demonstrations. Extensive use of CAD tools for logic minimization, logic synthesis, and system simulation. Rapid system prototyping with off-the-shelf and custom components. Laboratory exercises and a semester project. Prerequisites: Electrical Engineering 151L and 163L (or Biomedical Engineering 163L with consent of instructor). One course. *Kanopoulos*

252. Advanced Digital Computer Architecture. A second course on computer architecture. Definition of high-performance computing. Performance measurement. Memory organization, cache hierarchies, and virtual memory. Instruction set design, instruction pipelining, superscalar processing. Vector processing. High-performance input/output. Multiprocessor interconnection networks, communications, and synchronization. Survey of current architectures. Prerequisite: Computer Science 104 or Electrical Engineering 152L. One course. *Board*

253. Parallel System Performance. Intrinsic limitations to computer performance. Amdahl's Law and its extensions. Components of computer architecture and operating systems, and their impact on the performance available to applications. Intrinsic properties of application programs and their relation to performance. Task graph models of parallel programs. Estimation of best possible execution times. Task assignment and related heuristics. Load balancing. Specific examples from computationally intensive, I/O intensive, and mixed parallel and distributed computations. Global distributed system performance. Prerequisites: Computer Science 110; Electrical Engineering 151L and 152L. One course. *Gelenbe*

254. Fault-Tolerant and Testable Computer Systems. Faults and failure mechanisms, test generation techniques and diagnostic program development for detection and location of faults in digital networks; design for testability, redundancy techniques, self-checking and fail-safe networks, fault-tolerant computer architectures. Prerequisite: Electrical Engineering 151L or equivalent. C-L: Computer Science 225. One course. *Marinos*

255. Mathematical Methods for Systems Analysis I. Basic concepts and techniques used in the stochastic modeling of systems. Elements of probability, statistics, queuing theory, and simulation. Prerequisite: four semesters of college mathematics. C-L: Computer Science 226. One course. *Trivedi*

257. Performance and Reliability of Computer Networks. Methods for performance and reliability analysis of local area networks as well as wide area networks. Probabilistic analysis using Markov models, stochastic Petri nets, queuing networks, and hierarchical models. Statistical analysis of measured data and optimization of network structures. Prerequisites: Electrical Engineering 156 and 255. One course. *Trivedi*

258. Artificial Neural Networks. Elementary biophysical background for signal propagation in natural neural systems. Artificial neural networks (ANN) and the history of computing; early work of McCulloch and Pitts, of Kleene, of von Neumann and others. The McCulloch and Pitts model. The connectionist model. The random neural network model. ANN as universal computing machines. Associative memory; learning; algorithmic aspects of learning. Complexity limitations. Applications to pattern recognition, image processing and combinatorial optimization. Prerequisite: Electrical Engineering 151L. One course. *Gelenbe*

261. Full Custom VLSI Design. A first course in VLSI design with CMOS technologies. A study of devices, circuits, fabrication technology, logic design techniques, subsystem design and system architecture. Modeling of circuits and subsystems. Testing of gates, subsystems and chips, and design for testability. The fundamentals of full-custom design, and some semi-custom design. Prerequisite: Electrical Engineering 151L or equivalent; Electrical Engineering 163L (or Biomedical Engineering 163L with consent of instructor) or equivalent. One course. *Morizio*

262. Advanced VLSI Design and Test. An advanced course in VLSI design with emphasis on the design of application specific IC's (ASIC) for a given set of specifications. Discussions of available technologies for ASIC implementation and tradeoffs in using these technologies. Static and dynamic CMOS design of commonly used circuits (adders, multipliers, RAM, pads). Packaging and testing of ASIC's with emphasis on functional and performance verification. This course stresses the design of ASIC's within a systems design environment and with the use of appropriate design tools that can be used to validate a design based on a given set of design specifications. Prerequisite: Electrical Engineering 261. One course. *Kanopoulos*

263. Multivariable Control. Prerequisites: a course in linear systems and classical control, or consent of instructor. See C-L: Civil Engineering 263; also C-L: Mechanical Engineering 263. One course. *Bushnell, Clark, Gavin, or H. Wang*

266. VLSI Design Verification Techniques. VLSI verification tool design. Design and capabilities of circuit simulation, timing simulation, logic simulation, and functional simulation. Techniques applied in timing verification and other static verification tools. Parallel processing and its application to simulation. Physical design issues related to verification. Prerequisite: Electrical Engineering 261, working knowledge of C. One course. *Staff*

269. VLSI Chip Testing. Introduction to VLSI chip and system testing. Testing theory, strategies, and fault identification. Hands-on testing experience with faulty chips and systems, chips designed in Electrical Engineering 261, and testing equipment available in the department. Prerequisite: Electrical Engineering 261. One course. *Staff*

271. Electromagnetic Theory. The classical theory of Maxwell's equations; electrostatics, magnetostatics, boundary value problems including numerical solutions, currents and their interactions, and force and energy relations. Three class sessions. Consent of instructor required. One course. *Carin or Joines*

272. Electromagnetic Communication Systems. Review of fundamental laws of Maxwell, Gauss, Ampere, and Faraday. Elements of waveguide propagation and antenna radiation. Analysis of antenna arrays by images. Determination of gain, loss, and noise temperature parameters for terrestrial and satellite electromagnetic communication systems. Prerequisite: Electrical Engineering 170L or 271. One course. *Joines*

273. Optical Communication Systems. Mathematical methods, physical ideas, and device concepts of optoelectronics. Maxwell's equations, and definitions of energy density and power flow. Transmission and reflection of plane waves at interfaces. Optical resonators, waveguides, fibers, and detectors are also presented. Prerequisite: Electrical Engineering 170L or equivalent. One course. *Joines*

274. Modern Optics I. Optical processes including the propagation of light, coherence, interference, and diffraction. Consideration of the optical properties of solids with applications of these concepts to lasers and modern optical devices. Lecture and laboratory projects. C-L: Physics 185. One course. *Guenther*

275. Microwave Electronic Circuits. Microwave circuit analysis and design techniques. Properties of planar transmission lines for integrated circuits. Matrix and computer-aided methods for analysis and design of circuit components. Analysis and design of input, output, and interstage networks for microwave transistor amplifiers and oscillators. Topics on stability, noise, and signal distortion. Prerequisite: Electrical Engineering 170L or equivalent. One course. *Joines*

276. Laser Physics. Prerequisites: Electrical Engineering 170L or Physics 182 and Electrical Engineering 211 or Physics 211. See C-L: Physics 261. One course. *Skatrud*

281. Random Signals and Noise. Introduction to mathematical methods of describing and analyzing random signals and noise. Review of basic probability theory; joint, conditional, and marginal distributions; random processes. Time and ensemble averages, correlation, and power spectra. Optimum linear smoothing and predicting filters. Introduction to optimum signal detection, parameter estimation, and statistical signal processing. Prerequisite: Mathematics 135 or Statistics 113. One course. *Collins or Hansen*

282. Digital Signal Processing. Introduction to the fundamentals of processing signals by digital techniques with applications to practical problems. Discrete time signals and systems, elements of the Z-transform, discrete Fourier transforms, digital filter design techniques, fast Fourier transforms, and discrete random signals. One course. *Nolte*

283. Digital Communication Systems. Digital modulation techniques. Coding theory. Transmission over bandwidth constrained channels. Signal fading and multipath effects. Spread spectrum. Optical transmission techniques. Prerequisite: Electrical Engineering 281 or consent of instructor. One course. *Staff*

284. Acoustics and Hearing. Prerequisites: Mathematics 111 and Physics 52L or equivalents. See C-L: Biomedical Engineering 235. One course. *Collins or Trahey*

285. Signal Detection and Extraction Theory. Introduction to signal detection and information extraction theory from a statistical decision theory viewpoint. Subject areas covered within the context of a digital environment are decision theory, detection and estimation of known and random signals in noise, estimation of parameters and adaptive recursive digital filtering, and decision processes with finite memory. Applications to problems in communication theory. Prerequisite: Electrical Engineering 281 or consent of instructor. One course. *Nolte*

286. Digital Processing of Speech Signals. Detailed treatment of the theory and application of digital speech processing. Modeling of the speech production system and speech signals; speech processing methods; digital techniques applied in speech transmission,

speech synthesis, speech recognition, and speaker verification. Acoustic-phonetics, digital speech modeling techniques, LPC analysis methods, speech coding techniques. Application case studies: synthesis, vocoders, DTW (dynamic time warping)/HMM (hidden Markov modeling) recognition methods, speaker verification/identification. Prerequisite: Electrical Engineering 182 or equivalent or consent of instructor. One course. *Hansen*

287. Underwater Communications. Elements of communication theory and digital signal processing are combined with basic physics and oceanography to offer an overview of underwater communications, with an emphasis on the radar/sonar problem. Beamforming with transducer arrays. Signal design and target resolution; the ambiguity function. The ocean as a communication channel: sound propagation and ambient noise characteristics. Performance analysis of selected communication scenarios and case studies of operational sonar systems. Prerequisite: Electrical Engineering 181 or consent of instructor. One course. *Staff*

288. Image and Array Signal Processing. Multidimensional digital signal processing with applications to practical problems in image and sensor array processing. Two-dimensional discrete signals and systems, discrete random fields, 2-D sampling theory, 2-D transforms, image enhancement, image filtering and restoration, space-time signals, beamforming, and inverse problems. Prerequisite: Electrical Engineering 282 or consent of instructor. One course. *Krolik*

289. Adaptive Filters. Adaptive digital signal processing with emphasis on the theory and design of finite-impulse response adaptive filters. Stationary discrete-time stochastic processes, Wiener filter theory, the method of steepest descent, adaptive transverse filters using gradient-vector estimation, analysis of the LMS algorithm, least-squares methods, recursive least squares and least squares lattice adaptive filters. Application examples in noise cancelling, channel equalization, and array processing. Prerequisites: Electrical Engineering 281 and 282 or consent of instructor. One course. *Krolik*

299. Advanced Topics in Electrical Engineering. Opportunity for study of advanced subjects related to programs within the electrical engineering department tailored to fit the requirements of a small group. Consent of director of undergraduate studies and of supervising instructor required. One course. *Staff*

THE MAJOR

The major requirements are included in the minimum total of 34 courses listed under the general requirements and departmental requirements. The program of courses must include an approved electrical engineering course which must be taken in the junior or senior year of the program. This course must have as a prerequisite at least one course in the discipline.

Mechanical Engineering and Materials Science (ME)

Professor Cocks, *Chair*; Associate Professor Knight, *Director of Undergraduate Studies*; Professors Bejan, Dowell, Garg, Gösele, Harman, Hochmuth, Pearsall, Shaughnessy, Shepard, and Tan; Associate Professors Bliss, Eom, Jones, Needham, Quinlan, Virgin, and Wright; Assistant Professors Chen, Clark, Hall, Howle, and Thompson; Associate Research Professor Zhong; Assistant Research Professors Florea, Galbraith, Ting-Peall, Thomas, and Zhelev; Adjunct Professors Burton, Lee, and Wu; Adjunct Associate Professor Crowson

A major in mechanical engineering is available in this department. The mechanical engineering program is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Mechanical engineers are concerned with the optimum use of materials, energy, time, and individual effort to serve societal needs through the design of machines, structures, and

mechanical and thermal systems, and through better understanding of dynamic processes involving these systems. They have a wide involvement in many industries including product manufacturing, transportation, power generation, construction, aerospace, electronics, biomechanical and biomedical engineering, and national defense. Within these industries, the engineer might specialize in the design of machinery or fluid handling systems, the analysis of heat transfer from electronics packages or of vibration in mechanical systems, the automation of manufacturing processes, the efficient operation of industrial plants, the marketing of technical products or services, or any of a number of other activities. The individual's contribution may lie anywhere in the spectrum from highly theoretical to imminently practical, and often involves operating as an engineering manager.

Because mechanical engineers in industry and research engage in such a great variety of activities, their education must be broadly based. Although individual engineers may specialize within their industry positions or in graduate study, each must have the background needed to contribute in any of several technical areas, to combine knowledge of multiple topics when necessary, and to interact with members of other disciplines and professions in accomplishing engineering goals. Thus the mechanical engineer's program of study must include fundamental grounding in mathematics and basic sciences, applications in several engineering sciences, and team-based experience in the process of design, where theory is applied in the context of real needs and limitations and where judgment must be exercised. Furthermore, to be a responsible member of the engineering profession, each graduate must be aware of social, ethical, environmental and economic factors and constraints on engineering activity, and must understand the importance of these matters in a global context.

With these considerations in mind, the goals of the undergraduate mechanical engineering program are to provide:

- the knowledge, skills, and credentials needed to be successful at the entry level of the practice of engineering.
- the preparation necessary to undertake the initial steps leading to professional registration.
- an educational preparation for graduate or professional study.
- an educational background that is the basis for professional growth and leadership throughout a career that may encompass a broad range of endeavors, both technical and nontechnical.

The curriculum capitalizes on the exceptional abilities of our highly select students to cultivate the learning, thinking, and problem-solving abilities needed to adapt, to develop, and to exercise responsible leadership through times of rapid change. The program provides firm preparation in the essential engineering topics while allowing wide flexibility for students to pursue their own specialized interests.

11, 12. Undergraduate Research in Mechanical Engineering. An elective program in which undergraduate students participate in an ongoing program of research with mechanical engineering faculty members. The research topic pursued by the student is arranged by mutual agreement between the student and the participating faculty member. For freshmen only. Quarter course each. *Staff*

50S. Materials, Failure, Risk, and Safety. Introduction to materials science and engineering, emphasizing the relationships between the structure of a solid and its properties. Atomic and molecular origins of mechanical behavior, fracture, and other properties of metals, alloys, polymers, ceramics, glasses, and composites. Case studies will emphasize risk assessment and prevention in the uses and misuses of structural materials. Open only to students in the FOCUS Program, Structure in Nature and Human Designs. One course. *Pearsall*

101L. Thermodynamics. The principal laws of thermodynamics for open and closed systems and their application in engineering. Properties of the pure substance, relationships

among properties, mixtures and reactions. Power and refrigeration cycle analysis. Prerequisite: Physics 52L. One course. *Harman, Hochmuth, or Thompson*

115L. Failure Analysis and Prevention. A study and analysis of the causes of failure in engineering materials and the diagnosis of those causes. Elimination of failures through proper material selection, treatment, and use. Case histories. Examination of fracture surfaces. Laboratory investigations of different failure mechanisms. Prerequisites: Engineering 75L and 83L or consent of instructor. One course. *Cocks, Jones, or Pearsall*

120L. Engineering Instrumentation and Measurements. Analysis, design, and application of instrumentation. Error analysis and propagation. Experimental laboratory with PC based measurement and data acquisition, analysis, and graphic display. Corequisite: Mechanical Engineering 130L. One course. *Virgin*

126L. Fluid Mechanics. An introductory course emphasizing the application of the principles of conservation of mass, momentum, and energy to a fluid system. Physical properties of fluids, dimensional analysis and similitude, viscous effects and integral boundary layer theory, subsonic and supersonic flows, normal shock waves. Selected laboratory work. Corequisites: Engineering 123L and Mechanical Engineering 101L. One course. *Bliss, Hall, Hochmuth, Knight, or Shaughnessy*

130L. Modeling and Analysis of Dynamic Systems. Mathematical modeling of mechanical, electrical, fluid, and thermal systems. Emphasis is placed on a universal approach to system analysis. Topics include: state variables, linearization methods, transfer functions and block diagrams, and feedback techniques for the control of dynamic systems. Prerequisites: Mathematics 103 and Physics 51L. One course. *R. Clark, Virgin, or Wright*

141L. Mechanical Design. A study of practical aspects of mechanical design including conceptualization, specifications, and selection of mechanical elements. The design and application of mechanical components such as gears, cams, bearings, springs, and shafts. Practice in application of the design process through design projects. Prerequisite: Engineering 83L. One course. *Wright*

150L. Heat and Mass Transfer. A rigorous development of the laws of mass and energy transport as applied to a continuum. Energy transfer by conduction, convection, and radiation. Free and forced convection across boundary layers. Application to heat exchangers. Selected laboratory work. Prerequisites: Mathematics 111 and Mechanical Engineering 126L. One course. *Chen, Howle, or Knight*

160L. Mechanical Systems Design. An integrative design course addressing both creative and practical aspects of the design of systems. Development of the creative design process, including problem formulation and needs analysis, feasibility, legal, economic and human factors, aesthetics, safety, synthesis of alternatives, and design optimization. Application of design methods through several projects including a term design project. Prerequisites: Mechanical Engineering 141L and 150L. One course. *Staff*

165. Special Topics in Mechanical Engineering. Study arranged on a special engineering topic in which the faculty has particular interest and competence as a result of research and professional activities. Consent of instructor and director of undergraduate studies required. Half course or one course each. Variable credit. *Staff*

183. Power Generation. Basic concepts of thermodynamics, heat transfer, and fluid flow applied to power generation processes. Nuclear reaction theory and reactor technology; fossil fuel combustion theory and modern boiler practice. Power plant ancillary equipment and processes. Design considerations and analyses include economic and environmental factors. One course. *Harman*

198. Projects in Mechanical Engineering. Individual projects arranged in consultation with a faculty member. Open only to seniors enrolled in the graduation with distinction program or showing special aptitude for research. Half course to two courses. Prerequisites: *B* average and consent of the director of undergraduate studies. Variable credit. *Staff*

202. Engineering Thermodynamics. Axiomatic formulations of the first and second laws. General thermodynamic relationships and properties of real substances. Energy, availability, and second law analysis of energy conversion processes. Reaction and multiphase equilibrium. Power generation. Low temperature refrigeration and the third law of thermodynamics. Thermodynamic design. One course. *Bejan*

207. Transport Phenomena in Biological Systems. See C-L: Biomedical Engineering 207; also C-L: Civil Engineering 207. One course. *Katz, Truskey, or Yuan*

210. Intermediate Dynamics. Comprehensive treatment of the dynamic motion of particles and rigid bodies with an introduction to nonlinear dynamics and the vibration of continuous systems. Topics include: conservation of linear and angular momentum, superposition applied to linear systems, motion in inertial and noninertial frames of reference, Hamilton's principle and Lagrange's equations, and generalized coordinates. C-L: Civil Engineering 210. One course. *Hall or Knight*

211. Theoretical and Applied Polymer Science. An advanced course in materials science and engineering dealing specifically with the structure and properties of polymers. Particular attention paid to recent developments in the processing and use of modern plastics and fibers. Product design considered in terms of polymer structures, processing techniques, and properties. C-L: Biomedical Engineering 208. One course. *Pearsall*

212. Electronic Materials. An advanced course in materials science and engineering dealing with the various materials important for solid-state electronics including semiconductors, ceramics, and polymers. Emphasis on thermodynamic concepts and on defects in these materials. Materials preparation and modification methods for technological applications. Prerequisite: Engineering 83L. One course. *Tan*

213. Physical Metallurgy. An advanced materials science course focusing on the relationships between structure and properties in metals and alloys. Conceptual and mathematical models developed and analyzed for crystal structures, elastic and plastic deformation, phase transformations, thermodynamic behavior, and electrical and magnetic properties. Prerequisites: Engineering 83L and Mechanical Engineering 101L. One course. *Pearsall*

214. Corrosion and Corrosion Control. Environmental aspects of the design and utilization of modern engineering alloys. Theory and mechanisms of corrosion, particularly in seawater and atmospheric environments. Microstructural aspects of diffusion, oxidation, hot corrosion, and stress corrosion. Prerequisite: Engineering 83L. One course. *Jones*

215. Biomedical Materials and Artificial Organs. Prerequisite: Biomedical Engineering 83L, Chemistry 151L or Engineering 83L or consent of instructor. See C-L: Biomedical Engineering 215. One course. *Reichert*

216. Mechanical Metallurgy. An advanced materials science course dealing with the response of materials to applied forces. Mechanical fundamentals; stress-strain relationships for elastic behavior; theory of plasticity. Metallurgical fundamentals; plastic deformation, dislocation theory; strengthening mechanisms. Mechanical behavior of polymers. Applications to materials testing. Prerequisites: Engineering 75L and Engineering 083L. One course. *Jones*

217. Fracture of Engineering Materials. Conventional design concepts and their relationship to the occurrence of fracture. Linear elastic and general yield fracture mechanics. Microscopic plastic deformation and crack propagation. The relationship between macro-

scopic and microscopic aspects of fracture. Time dependent fracture. Fracture of specific materials. Prerequisites: Engineering 83L and Mechanical Engineering 115L. One course. *Jones*

218. Thermodynamics of Electronic Materials. Basic thermodynamic concepts applied to solid state materials with emphasis on technologically relevant electronic materials such as silicon and GaAs. Thermodynamic functions, phase diagrams, solubilities and thermal equilibrium concentrations of point defects; nonequilibrium processes and the kinetic phenomena of diffusion, precipitation, and growth. One course. *Tan*

221. Compressible Fluid Flow. Basic concepts of the flow of gases from the subsonic to the hypersonic regime. One-dimensional wave motion, the acoustic equations, and waves of finite amplitude. Effects of area change, friction, heat transfer, and shock on one-dimensional flow. Moving and oblique shock waves and Prandtl-Meyer expansion. One course. *Shaughnessy*

225. Mechanics of Viscous Fluids. Equations of motion for a viscous fluid, general properties and selected solutions of the Navier-Stokes equations, the Stokes equations, laminar boundary layer equations with selected solutions and approximation techniques, origin of turbulence. One course. *Hochmuth*

226. Intermediate Fluid Mechanics. A survey of the principal concepts and equations of fluid mechanics, fluid statics, surface tension, the Eulerian and Lagrangian description, kinematics, Reynolds transport theorem, the differential and integral equations of motion, constitutive equations for a Newtonian fluid, the Navier-Stokes equations, and boundary conditions on velocity and stress at material interfaces. One course. *Shaughnessy or Thompson*

227. Advanced Fluid Mechanics. Flow of a uniform incompressible viscous fluid. Exact solutions to the Navier-Stokes equation. Similarity methods. Irrotational flow theory and its applications. Elements of boundary layer theory. Prerequisite: Mechanical Engineering 226 or consent of instructor. One course. *Shaughnessy*

228. Lubrication. Derivation and application of the basic governing equations for lubrication; the Reynolds equation and energy equation for thin films. Analytical and computational solutions to the governing equations. Analysis and design of hydrostatic and hydrodynamic slider bearings and journal bearings. Introduction to the effects of fluid inertia and compressibility. Dynamic characteristics of a fluid film and effects of bearing design on dynamics of machinery. Prerequisites: Mathematics 111 and Mechanical Engineering 126L. One course. *Knight*

229. Computational Fluid Mechanics and Heat Transfer. An exposition of numerical techniques commonly used for the solution of partial differential equations encountered in engineering physics. Finite-difference schemes (which are well-suited for fluid mechanics problems); notions of accuracy, conservation, consistency, stability, and convergence. Recent applications of weighted residuals methods (Galerkin), finite-element methods, and grid generation techniques. Through specific examples, the student is guided to construct and assess the performance of the numerical scheme selected for the particular type of transport equation (parabolic, elliptic, or hyperbolic). One course. *Howle*

230. Modern Control and Dynamic Systems. Dynamic modeling of complex linear and nonlinear physical systems involving the storage and transfer of matter and energy. Unified treatment of active and passive mechanical, electrical, and fluid systems. State-space formulation of physical systems. Time and frequency-domain representation. Controllability and observability concepts. System response using analytical and computational techniques. Lyapunov method for system stability. Modification of system characteristics using feedback control and compensation. Emphasis on application of techniques to physical systems. One course. *Garg*

231. Adaptive Structures: Dynamics and Control. Integration of structural dynamics, linear systems theory, signal processing, transduction device dynamics, and control theory for modeling and design of adaptive structures. Classical and modern control approaches applied to reverberant plants. Fundamentals of adaptive feedforward control and its integration with feedback control. Presentation of a methodical design approach to adaptive systems and structures with emphasis on the physics of the system. Numerous MATLAB examples provided with course material as well as classroom and laboratory demonstrations. One course. *Clark*

232. Optimal Control. Prerequisite: Electrical Engineering 141 or equivalent. See C-L: Electrical Engineering 246. One course. *Bushnell*

235. Advanced Mechanical Vibrations. Analytical and experimental procedures applied to the design of machines and systems for adequate vibration control. Determination of eigenvalues and eigenvectors by iteration and computer techniques, transfer matrices applied to lumped and distributed systems, analytical and numerical methods of obtaining the pulse response of plane and three-dimensional multimass systems, convolution and data processing, introduction to random vibration. One course. *Knight or Wright*

236. Engineering Acoustics. Fundamentals of acoustics including sound generation, propagation, reflection, absorption, and scattering. Emphasis on basic principles and analytical methods in the description of wave motion and the characterization of sound fields. Applications including topics from noise control, sound reproduction, architectural acoustics, and aerodynamic noise. Occasional classroom or laboratory demonstration. Prerequisites: Engineering 123L and Mathematics 111 or consent of instructor. One course. *Bliss*

237. Aerodynamics. Fundamentals of aerodynamics applied to wings and bodies in subsonic and supersonic flow. Basic principles of fluid mechanics and analytical methods for aerodynamic analysis. Two- and three-dimensional wing theory, slender-body theory, lifting surface methods, vortex and wave drag. Brief introduction to vehicle design, performance, and dynamics. Special topics such as unsteady aerodynamics, vortex wake behavior, and propeller and rotor aerodynamics. One course. *Bliss*

238. Advanced Aerodynamics. Advanced topics in aerodynamics. Conformal transformation techniques. Three-dimensional wing theory, optimal span loading for planar and nonplanar wings. Ground effect and tunnel corrections. Propeller theory. Slender wing theory and slender body theory, transonic and supersonic area rules for minimization of wave drag. Numerical methods in aerodynamics including source panel and vortex lattice methods. Prerequisite: Mechanical Engineering 237. One course. *Hall*

239. Unsteady Aerodynamics. Analytical and numerical methods for computing the unsteady aerodynamic behavior of airfoils and wings. Small disturbance approximation to the full potential equation. Unsteady vortex dynamics. Kelvin impulse and apparent mass concepts applied to unsteady flows. Two-dimensional unsteady thin airfoil theory. Time domain and frequency domain analyses of unsteady flows. Three-dimensional unsteady wing theory. Introduction to unsteady aerodynamic behavior of turbomachinery. Prerequisite: Mechanical Engineering 237. One course. *Hall*

240. Patent Technology and Law. The use of patents as a technological data base is emphasized including information retrieval in selected engineering disciplines. Fundamentals of patent law and patent office procedures. Consent of instructor required. One course. *Cocks*

245. Applications in Expert Systems. A comprehensive introduction to the key practical principles, techniques, and tools being used to implement knowledge-based systems. The classic MYCIN system studied in detail to provide historic perspective. Current systems employing combinations of production rules, prototypical knowledge, and frame-based case

studies. Student term projects consist of the development of individual, unique expert systems using the Texas Instruments Personal Consultant. Knowledge of LISP not a prerequisite. One course. *Wright*

252. Buckling of Engineering Structures. Prerequisite: Civil Engineering 131L or consent of instructor. See C-L: Civil Engineering 252. One course. *Virgin*

263. Multivariable Control. Prerequisites: a course in linear systems and classical control, or consent of instructor. See C-L: Civil Engineering 263; also C-L: Electrical Engineering 263. One course. *Bushnell, Clark, Gavin, or H. Wang*

265. Advanced Topics in Mechanical Engineering. Opportunity for study of advanced subjects related to programs within mechanical engineering tailored to fit the requirements of a small group. Approval of director of undergraduate or graduate studies required. Variable credit. *Staff*

268. Cellular and Biosurface Engineering. A combination of fundamental concepts in materials science, colloids, and interfaces that form a basis for characterizing: the physical properties of biopolymers, microparticles, artificial membranes, biological membranes, and cells; and the interactions of these materials at biofluid interfaces. Definition of the subject as a coherent discipline and application of its fundamental concepts to biology, medicine, and biotechnology. Prerequisite: Mechanical Engineering 208 or consent of instructor. One course. *Needham*

270. Robot Control and Automation. Review of kinematics and dynamics of robotic devices; mechanical considerations in design of automated systems and processes, hydraulic and pneumatic control of components and circuits; stability analysis of robots involving nonlinearities; robotic sensors and interfacing; flexible manufacturing; man-machine interaction and safety consideration. Prerequisites: Mechanical Engineering 230 or equivalent and consent of instructor. One course. *Garg*

275. Product Safety and Design. An advanced engineering design course that develops approaches to assessing and improving the safety of products and product systems. Safety is presented in terms of acceptable risk and analyzed through legal case studies. Probabilistic decision making; risk economics; risk analysis and assessment. Corequisite: Mechanical Engineering 160L. One course. *Pearsall*

277. Optimization Methods for Mechanical Design. Definition of optimal design. Methodology of constructing quantitative mathematical models. Nonlinear programming methods for finding "best" combination of design variables: minimizing steps, gradient methods, flexible tolerance techniques for unconstrained and constrained problems. Emphasis on computer applications and term projects. Consent of instructor required. One course. *Wright*

280. Convective Heat Transfer. Models and equations for fluid motion, the general energy equation, and transport properties. Exact, approximate, and boundary layer solutions for laminar flow heat transfer problems. Use of the principle of similarity and analogy in the solution of turbulent flow heat transfer. Two-phase flow, nucleation, boiling, and condensation heat and mass transfer. One course. *Bejan*

281. Fundamentals of Heat Conduction. Fourier heat conduction. Solution methods including separation of variables, transform calculus, complex variables. Green's function will be introduced to solve transient and steady-state heat conduction problems in rectangular, cylindrical, and spherical coordinates. Microscopic heat conduction mechanisms, thermophysical properties, Boltzmann transport equation. Prerequisite: Mathematics 111 or consent of instructor. One course. *Bejan or Chen*

282. Fundamentals of Thermal Radiation. Radiative properties of materials, radiation-materials interaction and radiative energy transfer. Emphasis on fundamental concepts including energy levels and electromagnetic waves as well as analytical methods for calculating radiative properties and radiation transfer in absorbing, emitting, and scattering media. Applications cover laser-material interactions in addition to traditional areas such as combustion and thermal insulation. Prerequisite: Mathematics 111 or consent of instructor. One course. *Chen*

290. Physical Oceanography. Introduction to the dynamic principles of ocean circulation with an emphasis on large temporal and spatial scales of motion. Topics include wind-driven and density-driven flow, western boundary intensification, mid-ocean, shelf, and tropical circulations. Prerequisites: Mathematics 31 and 32 or consent of instructor. C-L: Environment 290 and Geology 203. One course. *Lozier*

COURSES CURRENTLY UNSCHEDULED

102. Thermodynamics II

113. Introduction to Electronic Materials

208. Introduction to Colloid and Surface Science

224. An Introduction to Turbulence

THE MAJOR

The major requirements are included in the minimum total of thirty-four courses listed under the general requirements and departmental requirements. Specific courses which must be included are Engineering 75L, 83L, and 123L; Mechanical Engineering 101L, 120L, 126L, 130L, 141L, 150L, and 160L; Electrical Engineering 148L.



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